

THE ETHICS OF ECTOPIC PREGNANCY

ECTOPIC AND PATHOLOGICAL
PREGNANCIES
IN
CATHOLIC MORALITY

TIMOTHY LINCOLN BOUSCAREN
S.J., A.M., LL.B., S.T.D.

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by

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First published 1933.

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ISBN : 978-2-917813-53-9

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CONTENTS

THE ETHICS OF ECTOPIC PREGNANCY	1
CONTENTS	5
INTRODUCTORY NOTE ON THE STATE OF THE QUESTION	7
PART I THE HISTORY	9
CHAPTER I The Fight on Craniotomy and Direct Abortion	11
CHAPTER II Removing an Ectopic Fetus	27
PART II THE DOCTRINE	36
CHAPTER III Fundamental Principles	37
(a) The Animated Fetus	37
(b) The Fetus Before the Infusion of the Soul	51
Summary of principles	60
CHAPTER IV Some False or Inadequate Solutions	61
1. It is never allowed to kill the fetus directly as an unjust aggressor.	62
2. The supposed consent of the fetus is either inefficacious or unnecessary.	66
3. Conflict of rights affords no solution.	68
Effect of the Decrees of the Holy Office	72
PART III THE FACTS	79
CHAPTER V Physiology of Ectopic Gestation	80
Uterine Pregnancy	81
Extra-uterine pregnancy	84
Causes	85
Classification and frequency	87
Diagnosis	92
Diagnosis of advanced cases	93
Development	95

CONTENTS

Danger to the mother	106
Treatment of ectopic gestation	110
Abdominal Pregnancy near Term	110
Each case should be treated on its individual merits.	113
Ruptured Ectopic Pregnancy with Child Not Yet Viable	114
Treatment before Rupture of the Tube	115
Manner of operating	117
Chances of survival of the fetus to viability if the operation is deferred	120
Transplantation of the fetus from the tube to the uterus	123
PART IV THE ARGUMENT	131
CHAPTER VI Moral Argument and Conclusions	133
1. When the Pregnant Tube Is Removed, the Death of the Fetus Is Produced Only Indirectly.	134
2. This Indirect Removal Is Licit When There Is a Proportionately Grave Cause for the Operation.	141
3. Care Must Absolutely Be Taken to Baptize the Fetus Immediately	150
CHAPTER VII Summary of Conclusions	155

INTRODUCTORY NOTE ON THE STATE OF THE QUESTION

IN the course of several years during which the author has occasionally been called into consultation or asked to give his judgment on the licitness of ectopic operations, nothing has been more forcibly impressed upon his mind than this: that it is extremely difficult to give a satisfactory answer, or even a correct one, in a few words. The case itself is complicated, and its solution depends not only upon a thorough grasp of moral principles but also upon an accurate and full knowledge of many details of fact.

The present work, because it attempts to give a clear and complete solution, has been obliged to proceed at a leisurely pace and according to a definite order, even at the risk of tiring the reader. The order we have followed is: Part I, The History; Part II, The Doctrine; Part III, The Facts; Part IV, The Argument. Part I (Chapters I and II) merely records the historical background of the question. Part II (Chapters III and IV) outlines and examines in a general way the principles applicable to the case. Part III (Chapter V) is devoted entirely to the recording of expert medical testimony upon the facts of ectopic pregnancy. Finally, Part IV (Chapter VI) contains the exact statement of the thesis and the argument which sustains it.

It will not be easy for the reader to understand this argument, or even to understand perfectly the statement of the thesis, without having read the preceding chapters. It is for this reason that the argument has been deferred until the end of the book.

With this preliminary word of caution, we reproduce here at the outset, for those readers who may desire it, the exact wording of our thesis. It is as follows:

The removal of a pregnant fallopian tube containing a non-viable living fetus, even before the external rupture of the tube, can be done in such a way that the consequent death of the fetus will be produced only indirectly. Such an operation may be licitly performed if all the circumstances are such that the necessity for the operation is, in moral estimation, proportionate to the evil effect permitted. But in all such operations, if the fetus be probably alive, care must be taken to baptize the fetus immediately, at least conditionally.

PART I
THE HISTORY

CHAPTER I

THE FIGHT ON CRANIOTOMY AND DIRECT ABORTION

THIS chapter and the succeeding one are largely historical. Their importance lies in the fact that not only the statements of moral theologians, but also the decisions of the Sacred Roman Congregations, will be much better understood if they are viewed against the background of the facts and opinions which gave rise to them. The opinions quoted will be those not only of moralists but also of medical men, since the latter also form part of the historical background of the question. The present chapter will deal with abortion in general, the next with ectopics. This order is logical because, after all, the removal of an ectopic fetus is a particular form of abortion. Our present question is precisely whether every such removal is always necessarily a direct abortion, or whether (in case the tube itself is removed) it may under certain conditions be regarded as indirect. The order is also chronological, for abortion was known and practiced long before there was question of ectopics.

Abortion, which is the ejection or removal of a non-viable fetus, was an inveterate practice in ancient Greece. We read that Aspasia, the famous friend of Pericles, taught the practice at Athens. Even Plato and Aristotle thought it legitimate under certain conditions.¹ From the Greeks it spread to the Romans, and we find mention of it in Ovid and Seneca.² Later the Roman law provided a

¹ *Encyclopedia of Ethics and Religion*, Vol. 6, "Foeticide," p. 55.

² Ovid, in an allegorical elegy entitled "Nux," writes:

"Nunc uterum vitiat quae vult formosa videri,
Raraque in hoc aëvo est quae velit esse parens."

punishment for abortion; but this provision seems to have been inspired by the desire to protect the rights of the father rather than those of the unborn child as a human person.³

In spite of censures and prohibitions the vice remained common for centuries among the pagans. In the fifth century the Greek physician *Ætius* approved it, as did the Arab philosopher *Avicenna* in the tenth. It was, however, from the beginning regarded as contrary to Christian morals, and seems to have had few defenders among Christian nations before the end of the eighteenth century. One of its earliest influential exponents in Europe was *Nägele*, of the University of Heidelberg, who in 1826 read at a medical convention a dissertation entitled, "The Physician's Right of Life and Death at Childbirth,"⁴ in which he actually contended that a woman in childbirth could transfer to the physician the right over her own life and that of her child, so that, with her consent, he would act with perfect propriety in either taking her life by an operation or destroying the child by embryotomy.

From that time the practice of abortion and embryotomy spread like a plague through Europe. England and Germany, France and Belgium were affected. The Medical Academy of Paris, which had condemned abortion in 1827, approved it in 1852. A similar reversal of judgment occurred in Brussels. The *Dictionnaire de Médecine en Vingt Volumes* had condemned abortion and

Seneca, writing to his mother *Helvia*, considered it the highest praise to say:

"Numquam te fecunditatis ruz, quasi exprobraret ætatem, puduit,
numquam more aliarum intra viscera tua conceptas spes liberorum elisisti."

These quotations are made by *Eschbach* in his *Disputationes Physiologico-theologicae*, p. 279.

³ *Cicero*, enumerating the reasons for which abortion should be punished, does not mention the injustice to the child. He says:

"Rei capitalis damnata est, neque injuria, que spem parentis, memoriam
nominis, subdidit generis, haeredem familiæ, designatum reipublicæ
civem suscuerit."

Quoted by *Eschbach*, *op. cit.*, p. 280.

⁴ *De Jure Vitæ et Mortis*.

embryotomy in its first edition issued in 1830; but the second edition, issued in 1885, explicitly placed the seal of approval upon both whenever they were necessary as means to save the life of the mother.⁵

What is far more surprising is to find abortion, and even embryotomy, defended with almost scholastic argumentation during the latter part of the nineteenth century by clerical writers in the Holy City itself. As their arguments will be dealt with later, it will be sufficient now to give a very brief summary.⁶

Among the first of the specious arguments advanced was that a fetus whose presence constituted a real threat to the life of the mother was by that same token an unjust aggressor against her life, and hence might be directly killed and put out of the way as a means to save her.⁷

⁵ On November 27, 1852, the *Gazette Médicale de Paris* quoted the following piece of misguided eloquence in defense of therapeutic abortion from the pen of a Doctor Dechambre:

"On pèse d'une main le fétus, masse inerte, ébauche à peine commencée, et de l'autre la mère de famille en pleine activité sociale . . . et sentant une si énorme différence entre les deux, on ne raisonne plus, on ne consulte ni Liguori ni Saint Ambroise, on se rend à la voix qui vous crie de sacrifier l'enfant. Et cette voix, nous le croyons sincèrement, est la conscience du genre humain."

Thus an early advocate of therapeutic abortion rejects authority, renounces reason, and trusting to blind instinct, claims the approval of "the conscience of the human race."

⁶ Peter Avanzini, a priest, founder of the unofficial review, *Acta Sanctæ Sedis*, was a Doctor of Philosophy, of Theology, and of Civil and Canon Law. Joseph Pennacchi was a later editor of the *Acta Sanctæ Sedis*, and professor of theology in the Apollinare at Rome. He published a work *De Abortu et Embryotomia* at Rome in 1884. Other advocates of the licitness of abortion and craniotomy were Daniel Viscosi, a professor of theology in the Cerretano Seminary in the Kingdom of Naples, and Apicella, whose work, *La Craniotomia Considerata in Riguardo alla Morale*, was published in 1879.

⁷ Avanzini seems to have borrowed this argument from an obscure canonist, Theophilus Renaud, who has it in his *De Ortu Infantum per Sectionem Cesaream*, c. IX, n. 13, 14. This work never enjoyed any great authority. There are, it is true, some weighty authorities who compare a child in the womb to an unjust

Secondly, it was pretended that even craniotomy was not a direct killing, but merely a removal of the child, whose death, it was claimed, was merely permitted, in accordance with the well-known principle of the double effect.

A third argument was drawn from a supposed "conflict of rights" between the child and the mother. This argument was based on a misunderstanding of the principle stated by Taparelli, Liberatore, and others, that where there is a conflict of rights, the stronger right should prevail.⁸

Some made out their case on the supposition that the child could be regarded as yielding voluntarily his right to life under the circumstances. Avanzini, for instance, argues somewhat as follows: "Since the child must die in any event, he has really no right to life, but only the right to choose by what method he shall die. Now it is clear that no one can exercise such a choice to the detriment of another's life, especially when that other is his mother. And since the choice on the part of the fetus to die within the womb would entail the mother's death, it follows that the child loses the right to make that choice. Hence nothing remains to him; neither the right to live nor the right to choose the manner of his death." A remarkable piece of argumentation, surely, and a novel method for the transfer of rights!⁹

aggressor, but always under the supposition that the fetus in question is *not yet* animated. Cf. St. Alphonsus Liguori, Book III, n. 394, citing St. Antoninus, Sanchez, Laymann, and others.

⁸ It was easy to discover a conflict of rights and to declare the right of the mother to be the stronger. Thus the conclusion was fallaciously reached that the child might be directly killed. Cf. Nägele and Apicella in the works already cited; also Visconti in *L'Embryotomia nei Suoi Rapporti colla Morale Cattolica*, p. 270.

⁹ These and other arguments are dealt with at length in Eschbach's learned disputationes already cited, and also in a series of articles by Bishop Waffelaert in *Nouvelle Revue Théologique*, Vol. 16, pp. 94, 160, 293, 366, 377; Vol. 17, pp. 61, 200, 369.

Before citing the decisions¹⁰ of the Holy Office which put an end to whatever probability such arguments might have enjoyed, we must turn our attention for a moment to certain advances made in medical science which resulted in diminishing the proportion of cases in which embryotomy could be regarded as the only means of saving the life of the mother. This progress consisted partly in new operations by which it became practicable to deliver a living child under conditions which had theretofore been regarded as hopeless, and partly in the perfection to which a very ancient operation, the cesarean section, was brought by modern surgical science.

The new operations were nearly all concerned with enlarging either temporarily or permanently the aperture between the bones of the pelvis through which the child must pass in delivery. We must content ourselves with the barest summary of these new methods.

Syphysisotomy is a section of the joint of the pelvic bones which permits a slight enlargement of the aperture. It was invented by a French medical student, J. R. Sigault, in 1768, was later practiced by him and by a Neapolitan, Domenico Ferrari, with success; and has since undergone a number of modifications and improvements.¹¹

Pubiotomy is the section of the bones of the pelvis, which, after an early experimental stage, was finally brought to a practicable technique by Gigli in 1894, has since been successfully employed, and is now commonly preferred to symphysiotomy. Both of these operations, however, may now be classed as almost obsolete.¹²

¹⁰ See page 24.

¹¹ Cf. Cristalli, *Le Fonti delle Prime Operazioni Dilatanti il Bacino*. Naples, 1914.

¹² De Lee gives the following interesting details of history concerning these two operations:

"Pinæus, in 1570, refers to a section of the pelvic bones. De la Courvée, in 1655, delivered a child by section of the symphysis pubis after the death of the mother. Sigault, in 1768, invented the operation of symphysiotomy, but could not perform it until 1777. (...) In 1775, Aitken recommended

Ischyopubiotomy was developed by the famous Parisian surgeon, Pinard, in 1892. It is, however, of very limited application, and is said to be occupying at present a somewhat precarious position in medical opinion.

section of the bones on both sides of the joint by means of an articulated saw, but never did it on a live woman. In 1821, Champion de Bar le Duc pointed out the advantage of cutting the bone instead of the symphysis; and in 1830, Stoltz, of Strassburg, perfected the operation of pubiotomy, using a chain saw, very much as it is done today, but he also operated only on cadavers. In 1832, Galbiati tried Aitken's recommendation, but the mother and babe died from the operation itself, and pubiotomy all but disappeared until Gigli, of Florence, in 1894, drew general attention to the operation, and published his saw—a roughened steel wire—which he had invented for the express purpose of cutting the pelvic girdle. Bonardi, in 1897, performed the first operation with the saw, Gigli operating in 1902 the first time on the living. Symphysiotomy had a checkered career. In France an acrid polemic was waged about it, and Baudelocque, Caseaux, Du Bois, and La Chapelle finally caused its abandonment. In Germany and England the operation never attained a foothold, but in Italy, in spite of its high mortality and morbidity, it enjoyed a sporadic existence by grace of Galbiati and Morisani. With the improvement in asepsis and instrumentarium of the late eighties and the proper selection of cases, naturally the results improved. In 1891, Spinelli, a pupil of Morisani, went to Paris, interested Pinard in the revived operation, and the latter, within a year, performed it seventeen times. In 1892 and 1893 it was being done in all countries with the over-enthusiasm begotten by every new remedy, and for a time symphysiotomy threatened the firm position held by cesarean section. Toward the end of the last century, however, it lost ground entirely. Zweifel, in Leipzig, Kerr, of Glasgow, Jellett, now in New Zealand, and Pinard, of Paris, are among its few fast friends today. "In 1904, as a result of the publications of Gigli, Van de Velde, and Doderlein, pubiotomy took the center of the stage, and in the subsequent five years hundreds of operations were the surgery of that day performed the world over. Now the enthusiasm is waning because it has been found that the operation has an unavoidable maternal and fetal mortality and a considerable morbidity. While Stoeckel says pubiotomy has about disappeared from Europe, Doderlein, of Munich, Wallich, of Paris, and most American accoucheurs believe it still has a certain but small field of usefulness." J. E. De Lee, *Principles and Practice of Obstetrics*, Philadelphia, Saunders, 1924, p. 981.

To these operations, which aim at a temporary enlargement of the pelvis, may be added a number which are designed to effect a permanent enlargement.¹³

Of far greater importance are the improvements of the old cesarean section. The history of this famous operation may be summarized in five periods.

1. Up to the end of the fifteenth century, this delivery of a child through an opening cut in the lower abdomen of the mother was practiced only in cases where the mother was already dead.

2. In 1581, F. Rousset, of Paris, effected a delivery from a living mother in this way; and thereafter the operation began to be practiced before the death of the mother. But since

did not know how to heal the wound, especially the interior incision upon the uterus itself, infection was the almost inevitable outcome, the woman died in nearly every case, and the cesarean section was justly regarded as a death-dealing operation until 1876.

3. On the 21st of May, 1876, in a clinic at Pavia, Edward Porro performed for the first time a cesarean section in which, instead of merely opening the uterus, he removed it together with its appendages, the fallopian tubes and the ovaries. This famous operation became known as the "Porro operation" or the "demolitory cesarean," and held an important place in obstetrical surgery until 1882.

4. In 1882, Kehrer and Sanger conceived and perfected the suture of the uterus, which has since formed part of the technique of the "conservative cesarean operation," as it is appropriately called. It is in fact the classical ancient operation, but brought by modern science to such perfection that it conserves the organs and saves the life of the mother as well as that of the child.

¹³ Pestalozza et al. in *Trattato di Ostetricia*, Vol. 3, pp. 1202-1222, enumerate the following: Recisio Sacro-coccigea; Recisio Sacro-vertebralis; Recisio Pubica. The details do not really concern us. The Italian authorities cited regard these operations as still in the experimental stage.

5. Since 1907 the modern cesarean section has been still further perfected by various improvements, which are, however, of far less importance than those already mentioned.¹⁴

It is, therefore, due chiefly to the Porro operation and to the suture of the uterus invented by Kehrer and Sanger that the occasions for the practice of abortion and embryotomy have decreased in number, relatively speaking, in recent years. As early as 1893 at a medical convention in England, Dr. James Murphy, after giving an account of the achievements of Porro, Leopold, Sanger, Cameron, and others in this field, declared that there was no longer any medical reason which could give the color of excuse to the killing either of a mother or of a child.¹⁵ The same vigorous opinion was expressed in 1926, again at an English medical convention, and was supported by detailed scientific evidence.¹⁶ It must be admitted, however, that the majority opinion among medical men was, and is, to the contrary.¹⁷

¹⁴ Cf. Guzzoni, *Il Taglio Cesareo*, 1886; P. Gall, *Il Taglio Cesareo Addominale*, Bologna, 1922.

The latest improvements of the cesarean section consist essentially in making the incision of the uterus lower than was formerly done. De Lee, who has an interesting historical summary of this operation, says of these later developments:

"Osiander, in 1805, and Joerg, in 1806, had recommended a section of the cervical part of the uterus. This idea was revived in 1906 by Frank, of Bonn. Sellheim clarified the surgical anatomy of the parts, demonstrated the advantages of delivering the child through the zone of dilatation or exit passage rather than through the contracting portion of the uterus, and devised several methods of approach. His work is fundamental to all later modifications." *Op. cit.*, p. 1059.

There are twenty or more modifications of the so-called "low operation," whose general surgical denomination is "laparotrachelotomy." — *Ibid.*

¹⁵ *British Medical Journal*, August 26, 1893.

¹⁶ Cf. *Ecclesiastical Review*, September, 1927, p. 275.

¹⁷ De Lee, in his 1924 edition, thus summarizes modern medical opinion on this important ethical question:

"Pinard and a few Catholic authors demand the abolition of craniotomy on the living child, but the overwhelming majority of obstetrical authorities declare this extreme position untenable. All agree, however, that the

Neither the correct application of ethical principles nor the improvements made in the field of surgery have yet driven abortion and embryotomy from the field. The fact is that both of these forms of direct killing of a human being are openly defended in medical books, and held blameless by the laws of some states, being regarded as justified simply as means to an end—a perfect application of the pernicious and universally false principle that "the end justifies the means."

Thus, a recent European work on obstetrical surgery states as a general principle that "we are justified in sacrificing the life of the child for the mother in any case where we are confronted with a condition of extreme peril to her life as a result of pregnancy, together with the possibility of effecting a cure by means of abortion."¹⁸

necessity of destroying the child is less and less frequent as the diagnosis of spatial disproportion is earlier discovered, giving a chance for cesarean section and pubiotomy." *Op. cit.*, p. 1094.

¹⁸ Pestalozza et al., *op. cit.*, Vol. 2, p. 1038. The quotation in its original context is as follows:

"L'aborto dall'arte provocato trova la sua legittima indicazione per ragioni d'ordine medico e per ragioni d'ordine ostetrico. Non e qui il caso di parlare dell'aborto provocato per ragioni morali o politico-sociali, secondo le idee propugnate in Italia dal Bossi e seguaci, perche questa speciale indicazione non e stata ancora sanzionata dalle leggi; e tanto meno e qui il caso di parlare dell'aborto provocato a scopo criminoso, che e di offesa alla scienza, alla coscienza, alla legge ed alla fede. Stando dunque, come dobbiamo, all'aborto dall'arte provocato, sanzionato dalle leggi civili ed umanitarie ricorderemo per l'aborto provocato a scopo medico, che due distinti gruppi di affezioni, appartenenti alla madre le une ed all'uovo le altre, reclamano lo interrompimento della gravidanza fine dei suoi primi mesi. . . . Concludendo come concetto sintetico generale si potrebbe quindi ritenere che in tutti i casi di malattie aggravate dalla gravidanza, il suo artificiale interrompimento e legittimato. . . . In tesi generale potremo col Gaifami a proposito delle indicazioni attuali alle provocazioni dell'aborto ripetere che: 'saremo autorizzati nell'interesse della donna a sacrificare il feto quando riscontriamo gli estremi del pericolo di vita materna in conseguenza della gravidanza, unito alla possibilità di una guarigione dopo l'aborto.'

The same authorities declare that owing to the improved modern technique of the cesarean section, cases in which the abortion is "indicated" as the sole means to overcome difficulties of an obstetrical as distinguished from those of a medical nature, will be relatively rare, being practically limited to instances which combine a pelvic deformity irremediable by either symphysiotomy or pubiotomy, with inability on the part of the mother to sustain the shock of a cesarean operation. But in this case, as in the more frequent cases where abortion is regarded as necessary for medical reasons, they unhesitatingly counsel its use. As we have already indicated, there is not even a semblance of justification for this practice of direct abortion upon any sound ethical principle.

Nor do they hesitate to defend even embryotomy. After enumerating the various methods of destroying the fetus before its removal from the uterus,¹⁹ they discourse learnedly upon the licitness of such operations, and conclude that they are quite in accord with the dictates of conscience.²⁰

¹⁹ It is needless to describe in detail these dismal and bloody operations. Suffice it to say that new methods of child-murder have been added to those mentioned some forty years ago by Eschbach, who wrote:

"Embryotomia se extendit ad omnes chirurgicas operationes quibus occiditur fetus ut possit transire per vias naturales et sic ex utero exire. Sunt autem principaliiores istae operationes craniotomia, seu cephalotomia, decollatio, exenteratio. Prior fetus cranium perforat ut exeunte cerebrali substantia hoc volumine minuatur; altera fetus decollatur, ut extrahi iste per partes possit; tertia pectus aut ventrem exenterat ut fetus corpusculum magis magisque extenuatur." *Disputationes*, p. 434.

²⁰ Here is the argument:

"Si e giunti al punto che da alcuni si vorrebbe l'embriotomia su feto vivo fosse non solo non accettata e sconsigliata, ma sempre ed in tutti i casi venisse respinta e condannata. Quindi per costoro l'embriotomia si dovrebbe eseguire unicamente nel caso di feto morto, e si vivo, e non si potesse eseguire un'operazione cruenta sulla madre, si dovrebbe attendere che il feto fosse venuto a soccombere prima di dare mano all'atto embriotomico. Or bene noi, a dir vero, non siamo di questo aviso, perché si sembra asserto non privo di esagerazione e nel suo assolutismo preccetto non scevro vuol di artificiosi infringimenti; vuol di no equa valutazione

Enough has been said to show how widespread was the pernicious practice of abortion and embryotomy at the time when the principal decisions of the Church were rendered protecting the rights of unborn infants. At this point we shall cite only those decisions of the Holy Office which concern embryotomy and abortion in general, reserving for Chapter II those which deal with the removal of ectopic fetuses.

On May 28, 1884, the Holy Office, in reply to a query from the Cardinal Archbishop of Lyons, declared that "it may not safely be taught in Catholic schools that craniotomy is licit," even where without it both mother and child would perish, whereas by its use the mother's life could be saved.²¹

This decision was rendered at a time when craniotomy was being defended by some theologians even in Rome. Even after the decree a certain amount of doubt continued to exist in regard to some operations more or less akin to craniotomy. To solve these doubts authoritatively, a rather complicated set of questions²² was proposed to the Holy Office. The reply, dated August 19, 1889, states that the decree of May 28, 1884, was to be understood as

delle due esistenze ; vuoi anche di mancato estremo rimedio alle imperiose e peculiari contingenze del pratico esercizio professionale. . . . Quindi noi, e con noi molti altri, non crediamo di venire per nulla meno alla nostra scienza, alla nostra coscienza, ed alla nostra fede, nell' accettare ed ammettere sia pure nolenti, la embriotomia su feto vivo, bene inteso pero solo quando quest' atto operativo rappresenti e costituisca l'unico mezzo di risorsa e di salvezza per la vita della madre. 'Di due mali, e saggio scegliere il minore.'"—Pestalozza et al., *op. cit.*, Vol. 2, p. 1116.

²¹ The wording of the question was :

"An tuto doceri possit in scholis Catholicis licitam esse operationem chirurgicam, quam craniotomiam appellant, quando scilicet ea omissa mater et filius perituri sint, ea e contra admissa salvanda sit mater, infante percunio?" The answer : "Tuto doceri non posse." Cf. *Collectanea Sanctae Congregationis De Propaganda Fide*, Vol. 2, n. 1618.

²² Publishers' Note. These questions were given in full in the original French in an Appendix to the 1933 edition of this work.

applying to "every surgical operation which was a direct killing of the fetus or of the pregnant mother."²²

The above decisions had all condemned only *surgical operations* which were directly death-dealing either to the mother or to the child. A trace of doubt still survived in some quarters as to the licitness of abortion procured to save the life of the mother, by other than surgical means, or where it was not evident that the operation was a direct killing of the child. For example, would the mere removal of a child, alive, from the womb, where nothing further was done to end his life, but where, being not yet viable, he was certain to die as a result of the removal—would that be allowed, where it was the only means to save the mother's life? To settle this doubt the question was proposed to the Holy See by the Archbishop of Cambrai. On July 24, 1895, it was answered in the negative, with specific reference to the former decrees of May 28, 1884, and August 19, 1889.²³ This reply, as far as it concerned abortion, was confirmed by a later decree rendered May 4, 1898.²⁴

²² "In scholis Catholicis tuto doceri non posse licitam esse operationem chirurgicam quam craniotomiam appellant, sicut declaratum fuit die 28 Maii, 1884, et quancumque chirurgicam operationem directe occisivam fetus vel matris gestantis." Cf. *Collectanea*, Vol. 2, p. 201, note 1; Gaspari, *Fontes Juris Canonici*, Vol. 4, p. 486, note 2, where the date is given as 1888.

²³ The text of the question was as follows:

"Stephanus Maria Alphonsus Sonnois, Archiepiscopus Camarensis, ad pedes Sanctitatis Tuae devotissime pro voluntate, quæ sequuntur humiliter exponit: Titus, medicus, cum ad prægnantem graviter decubentem vocabatur, passim animadvertebat letalis morbi causam aliam non subesse præter ipsam prægnationem, hoc est fetus in utero præsentiam. Una igitur, ut matrem a certa atque imminentia morte salvaret, præsto ipsi erat via, procurandi scilicet abortum seu fetus ejectionem. Viam hanc consueto ipse inibat, adhibitis tamen mediis et operationibus, per se atque immediate non quidem ad id tendentibus ut in materno sinu fetus occiderent, sed solummodo ut vivus, si fieri posset, ad lucem ederetur, quamvis proxime moriturus utpote qui immaturus omnino adhuc esset. Januero lectis quo die 19 Aug. 1889 Sancta Sedes ad Camarensim Archiepiscopum rescripsit: 'tuto doceri non posse licitam esse quancumque operationem directe occisivam fetus, etiam si hoc necessarium foret ad matrem salvandam.'

The question of the possible licitness of direct abortion in any form is thus, for Catholic moralists and physicians, forever closed. The history of the question is certainly not without interest. That it was a difficult question to solve on principle, we must admit when we remember that not only were respectable authorities arguing the matter on both sides for years, but even upon craniotomy the Sacred Penitentiary had given a rather non-committal answer in 1872,²⁶ while, as to abortion, some of the greatest moralists in the Church, such men as Lehmkuhl, Ballerini, and Cardinal d'Annibale, did not hold that it was certainly wrong until forced to do so by the decrees of the Holy Office.²⁷ It should be noted that none of these Catholic moralists sought to base his conclusion upon the principle that the end justifies the means. In his later editions, Lehmkuhl admirably retracted his former opinion; but the very fact that this great theologian hesitated so long over the question is a commentary upon its inherent difficulty. We may fittingly close this part of the history with his words.²⁸

dubius hæret Titius circa licitatem operationum chirurgicarum, quibus non raro ipse abortum hucusque procurabat, ut prægnantes graviter ægrotantes salvaret. Quare, ut conscientie sue consulat, supplex Titius petit, utrum enuntias operationes in repetitis dictis circumstantiis instaurare tuto possit."

The answer: "Negative, juxta alia decreta, diei scilicet 28 Maii, 1884, et 19 Augusti, 1889." Cf. Gasparri, *Fons Juris Canonici*, Vol. 4, n. 1173.

²⁶ Ad II: "Quoad primam partem, Negative, juxta decretum feriae IV, 24 Julii, 1895, de abortus illiciteitate." Cf. Gasparri, *op. cit.*, Vol. 4, n. 1199. Cf. also reply of July 24, 1859, in *Analecta Ecclesiastica*, Vol. 3, p. 483.

²⁷ To the query: "An umquam licet operatio quæ vocatur craniotomia, vel similis operatio, quæ per se directe tendit ad occisionem infantis in utero positi?" the Sacred Penitentiary, under date of November 28, 1872, gave the reply: "Consult probatos auctores, sive veteres sive recentes, et prudenter agat." Cf. Lehmkuhl, *Theologia Moralis*, Vol. 1, n. 1002.

²⁸ Cf. Lehmkuhl, Vol. 1, n. 848, up to the seventh edition; Ballerini-Palmieri, Vol. 2, nn. 910 *et seq.*; d'Annibale, Vol. 2, n. 284.

²⁹ Translated from the latest, the twelfth, edition, Vol. 1, nn. 1007, 1008. The original text reads:

"In prioribus editionibus conatus sum afferre rationes, quibus suaderi possit, violentam illam invasionem in fetum ejusque vitale elementum fieri licite posse ad salvandam matrem alias peritaram. Et quamquam rem pro dubia proponebam, in re adeo gravi nolens proprio iudicio fidere, tamen momenta quedam consideranda dedi, ne strictam obligationem, quae gravissimas difficultates tum medicis tum matribus aliquando creare potest pronuntiarem, antequam talis obligatio luce clarior evaderet, vel Ecclesiae iudicium hac de re ferretur.

"Momenta autem quae aliquid ponderis habere posse mihi visum erat, haec erant: per se nimirum fetus ad illud elementum vitale, in existentiam in utero dico, jus haber, cum natura hoc pro ipso consideret. At dixeris fortasse in illis circumstantiis jus illud alio jure priore, i. e. matris, posse vinci, vel si mavis, posse fetum huic juri suo renuntiare, et si possit eum re ipsa renuntiare. Nam, si fas est hanc existentiam fetus in utero considerare ut bonum fetui extrinsecus ad vitam necessarium: fetus huic bono videtur, 1. posse renuntiare in favorem maternae vitae, fere sicut in naufragio amicus amico tabulam cedere potest, se ipsum undis committens atque mox periturus; et 2. revera renuntiare, saltern in illis circumstantiis, quando periculum sine baptismo decadendi ex abortu inducto non aggravatur sed potius minuitur, siquidem jus illud existendi in utero turn plane inutile sibi evaserit. Si vero considerari debet illa existentia in utero tamquam elementum intrinsecus cum fetu ejusque vita conjunctum: tamen id, quod primo et per se invaditur, non videtur ipse fetus vivus esse sed aliquid, quod pari jure matris esse dixeris, ac fetus, atque hujus jus ut collidens cum jure matris precarium videtur evadere, sicut jus ad communem aerem, si casum flingas, in quo pro me et socio a me recepto aer jam non sufficiat. Ita haec operatio videbatur essentialiter distare a craniotomia.

"Verum aliter visum erat Sancto Officio, quod ejusmodi invasionem in vitale fetus elementum craniotomiae equiparata atque pro directa occisione habet, proin pro re intrinsecus illicita.

"Et revera rationes illae mox allatae speciosiores sunt quam veriores. Re ipsa enim primo et per se ipse fetus vivus invaditur eodem modo quo quis, quern letali vulnere alter confodit, invaditur. Violenter enim disrumpere membranas et fibras, quibus fetus cum utero materno concrevit, revera nihil est nisi letale vulnus fetui infligere. Neque similitudo est cum subtractione communis aëris, si quando is pro duobus non sufficeret, sed potius cum subtractione seu verius cum extractione aëris necessarii jam hausti, ut alterius serviret vitæ servandæ; quod certe a quolibet utpote directa occisio pro intrinsecus malo habetur."

CRANIOTOMY AND DIRECT ABORTION

In former editions I tried to adduce reasons to show that such a violent attack upon the fetus and upon its vital element might be allowed in order to save the life of the mother. Although I proposed the whole opinion as doubtful, being unwilling in so grave a matter to trust entirely to my own judgment, still I advanced some considerations against imposing a strict obligation which might at times cause the gravest difficulties both to physicians and to pregnant patients, at least until the obligation was seen to be absolutely certain or had been so declared by the Church.

The considerations which seemed to me to have some weight were the following. It is true that *per se* the fetus has a right to that vital element—I mean his inherence in the uterus—since nature has provided it for him. But one may perhaps say that under those circumstances the right may be forced to yield to a prior right of the mother; or, to put it another way, that the fetus can renounce his right, and if so that he does renounce it. For, if one may consider this inherence of the fetus in the womb as a good which is extrinsic to the fetus though necessary for his life, then it would seem that, in the first place, the fetus can renounce his right to it in favor of the mother's life, just as in shipwreck a man may yield a plank to his friend and slip off into the water, even though he must soon drown; and secondly it would seem that the fetus does in fact renounce his right, at least in every case where the risk to him of dying without baptism is not aggravated but rather lessened by the abortion, for in that case his right to inhere in the uterus has become quite void of any advantage to him. On the other hand, if we must regard the inherence of the fetus in the uterus as an element belonging intrinsically to the fetus and to the fetal life, yet it would seem that the thing which is attacked primarily and *per se* is not the living fetus himself but something which one might say with equal justice belongs to the mother as to the fetus. The latter's right thus coming in conflict with that of the mother seems to become less certain, just as does one's right to the common air we breathe, if we may imagine a case where that were not sufficient both for me and for a guest. For these reasons it seemed to me

that the operation in question was essentially different from craniotomy.

The Holy Office, however, thought otherwise. They have held that such an attack upon an element vital to the fetus is, no less than craniotomy, a direct killing of the child, and hence intrinsically wrong.

And in truth the reasons which I adduced were specious rather than truly convincing. For the truth is that the fetus himself is primarily and *per se* the object of attack, just as is a person whom another might strike with a mortal wound. To tear asunder violently the membranes and tissues which connect the fetus to the womb of the mother, is nothing else than to inflict a fatal wound upon him. There is no parity with the case of subtracting from the common supply of air which might be sufficient for one but not enough for two. Rather the case here is like the withdrawal or extraction of necessary air which one has already breathed, to place it at the disposal of another. This, as anyone can see, is a direct killing, and intrinsically evil.

CHAPTER II REMOVING AN ECTOPIC FETUS

FOR the purpose of supplying the historical background, here again a rather brief summary of the origin and development of the question will be sufficient. The decisions of the Holy See which touch upon it will also be mentioned, and the opinions of modern theologians will be briefly indicated.

The early stages of the discussion.—This question first received serious attention in the United States probably not long before the year 1893. In that year it was discussed in the *Ecclesiastical Review* by a number of eminent physicians and surgeons, who supplied the medical data, and by some noted theologians—Lehmkuhl, Sabetti, Ærtnys, and Eschbach—who debated the moral issue raised by the facts. It was a keen debate, and will be found full of interest still to anyone who will take the trouble to read it. Our purpose is not to reproduce it in detail, but merely to indicate the more important issues upon which the theologians differed.

Lehmkuhl expressed his opinion, which he kept substantially unchanged throughout the discussion, in these words:

It is hard to determine when and at what stage in the condition of the mother it is allowable to proceed with the operation, even though one regard it as not altogether forbidden. In my judgment the licitness of the operation may be maintained confidently and without any practical doubt, provided a fatal or deadly rupture of the mother's organs be really imminent. But the question whether that mortal danger is certainly imminent or is not yet quite certain to be fatal to the mother, so that the fetus can without fatal results be allowed to develop to such a state as to be capable of receiving baptism with greater security, or perhaps even to such a state as to be capable of living outside the womb—that question, if I mistake not, will be hard for the

physician to determine. From the moment when the latter alternative is to be denied and the former affirmed, there is, in my opinion, no theological difficulty. For it is my judgment that in that case the operations may be licitly performed, not of course those which are of such a nature as first to destroy the life of the fetus and then to remove it, but those which tend by nature directly to the removal of the fatal tumor, or of the fetus, and to obtaining for it the possibility of baptism, even though those operations also result in accelerating its death. The death in such cases is permitted, not intended.²⁹

Lehmkuhl, therefore, was of the opinion that the removal of an ectopic fetus, since it was an operation not certainly shown to be directly death-dealing, was licit when the danger of a fatal rupture in the maternal organs was imminent and could be averted by no other means. He held that under those conditions the death of The fetus could be positively permitted in accordance with the principle of the double effect. This opinion he strenuously defended against Sabetti and Eschbach, who were equally vigorous in attacking it. Further, Lehmkuhl on his part constantly denied the validity of the

²⁹ *Ecclesiastical Review*, Vol. 10, p. 60. The language which we have translated is as follows:

"Difficile est determinare tempus et conditiones matris in quibus licet ad operationem procedere, etsi eam non utcumque illicitam habes. . . . Equidem puto [licitatem excisionis] satis fidenter et sine practica dubitatione teneri posse si modo vere imminet fatalis seu letalis ruptura organorum maternorum. Verum utrum periculum illud fatale certo immineat, an nondum satis certo letale sit pro matre, sed sine letali ejusmodi exitu fetus ulterius evolvi usque ad tempus quo securius baptizetur, vel fortasse usque ad ætatem vitæ extra-uterinæ possit, id, si rem bene intellego, medicis difficile erit determinare. Quam primum hoc negare, illud affirmare debent, theologica difficultas, ex mea sententia, non adest. Tum enim censeo licite adhiberi, non eas quidem operationes quæ tendunt primo in fetus occidendum et consequenter in eum removendum, sed eas quæ tendunt directe in tumorem fatali seu fetus removendum eique baptismi possibilitatem conciliandam, etsi consequenter secum trahant mortis fetus accelerationem; quæ permittitur, non intenditur."

solution offered by Sabetti, who held that the fetus might be regarded as a materially unjust aggressor against the life of the mother.

While Lehmkuhl based his solution chiefly on the principle of the double effect, he also appealed to a fiction of consent on the part of the fetus; and in this he seems to hark back to the arguments which, as we have seen, he had formerly advanced in defense of abortion. Here are his words:

It is lawful for the fetus to deprive himself of a vital element, or, since he is as yet incapable of actual volition, it is lawful for another acting for him in accordance with his interpretative volition, to deprive the fetus of a vital element, in order that the mother may be saved and that the child himself may have a chance of baptism. I said it is lawful for him to *deprive himself*, and not to be *deprived*, so as to avoid having to discuss the question whether and under what circumstances it is allowed, when two lives are in danger, to deprive one against his will of an instrument which is necessary for his life, in order to save the life of the other. For in our case it is not necessary to argue that question.³⁰

Ærtnys contended in opposition to Lehmkuhl that the operation was a direct killing and therefore could not be permitted, while he also held against Sabetti that an ectopic fetus could by no means be regarded as an unjust aggressor. In cases, however, where a doubt existed as to the presence of a living fetus, he allowed the excision on the principle that the certain right of the mother should prevail over the right of the fetus, since the latter's existence was uncertain. He also further modified his opinion by a paragraph which is very hard to understand, but which in any event was not a retraction

³⁰ Translated from the *Ecclesiastical Review*, Vol. 9, p. 348. Other passages from which Lehmkuhl's full statement may be gathered are: Vol. 9, p. 347; Vol. 10, pp. 10, 60, 64; Vol. 11, pp. 9, 45, 125.

of his general judgment that the operation was to be regarded as illicit.³¹

Sabetti held in opposition to Lehmkuhl that all the operations for removing a non-viable fetus were directly death-dealing; yet that they might licitly be resorted to wherever it was certain that the ectopic pregnancy was or soon would become a deadly danger to the mother. His reason for this opinion was that in such cases the fetus might be considered as an unjust aggressor, at least materially, and as such might be directly killed. In his view the principle of the double effect could have no application because the two effects were not equally immediate, but rather the killing of the fetus was the means directly chosen to the end of saving the mother's life.³²

In the course of the debate a new champion of the rights of the unborn child appeared in the person of Father Eschbach, Rector of the French Seminary in Rome, who published several papers on the subject in current numbers of the *Analecta Ecclesiastica*.³³ He contended that the excision, regardless of the manner in which it was performed, was always illicit, as being certainly a direct killing of the fetus, which could be justified neither by the presumed consent of the fetus nor by regarding the fetus as an unjust aggressor.

The moral principles involved in this debate of forty years ago will recur in our discussion of the subject.³⁴ It will be sufficient at this point to indicate the reasons why that very interesting

³¹ "Si fetus non est vitalis sed jam ventrem matris egredi conatur, et in eo est ut organa matris dirumpat cum periculo vite matris, etiam tum approbo operationem quae tendit dumtaxat ad removendum periculum matris in exitu fetus; quia tunc neque procuratur abortus quippe qui jam naturaliter accidit, neque fetus occisio, cum in mortem ejus non influat, utpote quae ex abortu naturali secutura est. Extra istos casus approbare nequeo." *Ecclesiastical Review*, Vol. 10, p. 62. Cf. also Vol. 9, p. 352.

³² Sabetti's contributions to the controversy will be found in *Ecclesiastical Review*, Vol. 9, pp. 347, 429; Vol. 11, p. 129.

³³ *Analecta Ecclesiastica*, 1894, Vol. 2, pp. 88, 126.

³⁴ Cf. Part II, The Doctrine.

discussion of our problem by several great moral theologians failed to provide an adequate and satisfactory solution.

The primary reason seems to have been a certain vagueness of concept or at least of expression, in regard to the physical nature of the operation. Even the medical testimony adduced was not always precise. Some spoke of the excision of the "tumor," or of the "sac," others, of the removal of the fetus; but the distinction was nowhere emphasized. One only, so far as we could discover, stated explicitly that it was the fallopian tube itself with the enclosed fetus, which was to be removed.¹⁵ The moralists themselves did not insist very much on distinctions between the various operations based on their physical nature and order.

Moreover, it must be admitted that the respective opinions of each of those great theologians are somewhat invalidated at the present writing. Lehmkuhl's courageous opinion holding that the operation was not directly a killing of the child cannot now unqualifiedly commend itself to us, inasmuch as it included in its approbation at least one method of operating which has since been declared by the Holy Office to be a direct killing and intrinsically wrong. For he approved the answer of Father Holaind,¹⁶ "I answer, perform abdominal section, open the cyst, and baptize the child."¹⁷ This method of operating is now certainly condemned by the decree of the Holy Office, of May 5, 1902.¹⁸ Besides, we must remember that at this same period Lehmkuhl was defending medical abortion as at least probably licit, for reasons very similar to those adduced in this controversy, and which he himself afterward candidly repudiated.

Ærtyns' opinion holding that in cases of doubt as to the existence of a fetus the certain right of the mother should prevail in spite of

¹⁵ This was Doctor John F. Roderer, of Philadelphia, whose testimony was recorded in *Ecclesiastical Review*, Vol. 9, p. 340, and Vol. 10, p. 48.

¹⁶ *Ecclesiastical Review*, Vol. 9, p. 337.

¹⁷ Cf. *Ecclesiastical Review*, Vol. 10, p. 60.

¹⁸ Cf. p. 36.

the positively probable danger of directly killing a human being, seems to us to be inconsistent with the right use of the principle of probabilism.

Sabetti defended skilfully and vigorously an opinion which is now entirely, and rightly, abandoned; namely that the fetus could be regarded as a materially unjust aggressor.

Finally, Eschbach, who consistently denied that the operation could on any principle or under any circumstances be justified, seems to us to have been too severe.

Decrees of the Holy Office.—The decrees of the Holy Office on this subject are as follows:

August 19, 1889

It cannot safely be taught in Catholic schools that any surgical operation which is a direct killing of either the child or the pregnant mother, is allowed.

Among the questions to which this was a reply were two, the fifth and the sixth, which referred to excisions of ectopic fetuses.³⁹

May 4, 1898.—To the question: "Is laparotomy licit in the case of extra-uterine pregnancy or ectopic conceptions?" the Sacred Congregation replied:

In case of urgent necessity laparotomy for the removal of ectopic conceptions, is licit, provided serious and opportune provision is made, so far as is possible, for the life of both the fetus and the mother.⁴⁰

May 5, 1902.—To the question: "Whether it is sometimes licit to remove from the mother ectopic fetuses which are immature, before the expiration of the sixth month after conception, the Sacred Congregation replied:

³⁹ This decree is recorded in *Collectanea*, Vol. 2, p. 201, note 1, and in *Gaspari, Fontes Juris Canonici*, Vol. 4, p. 486, note 2. The questions will be found in the Appendix.

⁴⁰ *Gaspari, ep. cit.*, Vol. 4, n. 1199; *Collectanea*, Vol. 2, n. 1997; *Acta Sanctae Sedis*, Vol. 30, p. 703; *Lehmkuhl, Theologia Moralis*, Vol. 1, n. 1010.

In the Negative, according to the decree of May 4, 1898, which declares that as far as possible serious and opportune provision must be made for the life of both the fetus and the mother. As regards the time, let petitioner remember that according to the same decree no hastening of delivery is allowed unless it be done at a time and in a manner which are favorable to the lives of the mother and the child, according to ordinary contingencies.

This decree lacks the papal approbation.⁴¹

The interpretation of these decrees will be discussed in Chapter IV.

Opinions of modern theologians.—There is no unanimity of opinion among theologians as to the question whether a pregnant tube may be removed to save the mother's life, before the tube has actually ruptured.⁴²

It is of course clear from the decisions of May 4, 1898, and May 5, 1902, that the *direct removal* of an immature fetus, whether uterine or ectopic, is wrong and never permissible. So far, all agree. Several theologians, however, may be cited for the proposition that the removal is *indirect* when that which is removed in order to save the mother's life is not the fetus directly but the diseased organ of the mother in which the fetus is contained. Since according to this view the death of the fetus is only an indirect consequence of the operation, these authors, applying the principle of the double effect, hold that the excision of a fallopian tube containing a non-viable fetus is allowed when there is a proportionately grave reason

⁴¹ It was published in *Analecta Ecclesiastica*, Vol. 10, p. 337. Cf. Lehmkuhl, Vol. I, n. 1010. It is not found in Gasparri.

⁴² A few years ago, in the *Ecclesiastical Review*, Vol. 77, p. 276, September, 1927, Father Davis correctly summed up the situation thus:

"The subject of ectopic gestation is one of the few remaining problems in which opinion is not yet settled among moralists. There is still a wide divergence of opinion on the part of both moralists and surgeons, more so perhaps on the part of moralists, as to the right ethical treatment of such cases."

The situation has not materially changed since then.

of necessity for it. Three great authorities, beyond a doubt, can be cited for this liberal view. They are Lehmkuhl, Génicot, and Vermeersch.⁴³ It seems also that Ubach, Piscetta-Gennaro, Prümmer, and probably Ærtnys-Damen and Arregui may be considered as authorities for the same view.⁴⁴

Antonelli had formerly held the same view; he changed his opinion, however, in consequence of the decree of May 5, 1902. Noldin-Schmitt and Sabetti-Barrett also cling to the severer opinion denying the licitness of the operation under any pressure of necessity.⁴⁵

Slater⁴⁶ and Ferreres⁴⁷ fail to propose squarely the question as regards an ectopic fetus which is certainly alive and certainly not viable.

Where there is doubt as to whether the swelling which may be discerned in the tube is a living fetus or some sort of cyst or tumor not containing a living fetus, some of these authors allow the operation, even though they do not allow it where the presence of a living fetus is certain. Thus, Sabetti-Barrett, Slater, and perhaps also Ferreres and Noldin-Schmitt. It is to be regretted that some of these authors are not more explicit in stating their judgment. The

⁴³ Lehmkuhl, vol. 1, nn. 1010, 1011; Génicot-Salsmans, Vol. 1, n. 377; Vermeersch, Second Edition 1928, Vol. 2, n. 628. Vermeersch's opinion was a matter of dispute in 1927; it is now placed beyond doubt not only by his approval of our thesis, but by his own clear statement of his position in the second edition of his work, published the same year.

⁴⁴ Since it is not our intention to solve the question by an appeal to authority, it is unnecessary to re-open the dispute which has centered about some of the expressions used by these authors. Ubach is cited by Father Davis in *Ecclesiastical Review*, September, 1927, Vol. 77, p. 288. Cf. Piscetta-Gennaro, Vol. 2, nn. 223, 224; Prümmer, Vol. 2, n. 146; Ærtnys-Damen, Vol. 1, n. 583; Arregui, n. 241.

⁴⁵ Antonelli's former opinion is cited in Lehmkuhl, Vol. 1, n. 1011, from the edition of 1905; in later editions of Antonelli's work, *Medicina Pastoralis*, Vol. 2, n. 112, he at least implicitly holds the operation illicit. Cf. Noldin-Schmitt, Vol. 2, n. 112; Sabetti-Barrett, n. 273.

⁴⁶ *Moral Theology*, Vol. 2, p. 312.

⁴⁷ *Compendium Theologiae Moralis*, Vol. 1, n. 501.

vagueness of some of their expressions seems to be due to want of accuracy in describing the physiology of the subject. They speak of excising the "tumor," in such a way that it is not always clear whether they mean by this expression merely a swelling of the tube quite independent of the pregnancy or the mass growing in the tube by reason of the pregnancy itself. It is this partial obscurity, as well as the apparent diversity in the opinions on the subject, that leads us to believe that a thorough examination of the whole question is opportune.

PART II
THE DOCTRINE

CHAPTER III

FUNDAMENTAL PRINCIPLES

THE present chapter, which is devoted to the discussion of fundamental principles, may appear quite elementary to the Catholic reader, because its conclusions at least are matters of common knowledge in Catholic ethics. It will still be worthwhile, however, to examine our principles in their foundations, both in order to recommend them on rational grounds to those of our readers who are not in a position to accept Catholic teaching on grounds of authority, and also to give Catholic readers a wider background.

From the moment when the fetus is informed by a spiritual soul he is a human person and the subject of human rights; hence any direct attack upon his life is forbidden by the fifth commandment of the Decalogue. In the supposition that biological human life begins in the embryo before the infusion of the spiritual soul, the direct destruction of the fetus during that period would also be against the Natural Law, but, as we shall see, it would then be contrary to a different commandment, the sixth. We shall accordingly speak first of the fifth commandment as applying to the destruction of an animated fetus, then of the sixth as applying to that of a fetus not yet animated.

(A) THE ANIMATED FETUS

The fifth commandment of the law of God as given to Moses was: *Thou shalt not kill.*⁴⁸ It is our business now to explore the foundations of this commandment in the Law of Nature; that is, in

⁴⁸ Exodus 20, 13.

God's ordinances as promulgated in the nature of His creatures and discoverable by the light of natural human reason.

God, the Supreme Creator of the universe, being infinitely wise, and in all actions which have a term outside the Divine Nature, being also perfectly free, can neither act without a purpose, nor have a purpose worthy of Him, other than Himself. Hence, though He has no need of any creature, He created them all for Himself in this sense, that He wishes every order of creatures to reflect in their natures some of His perfections, and the whole graded hierarchy of creatures to conspire as it were toward the attainment of the precise degree of extrinsic glory to God, which He intended to attain by the creation of the universe.

Creatures lower in the hierarchy than men have their own peculiar intrinsic ends or purposes which God intended in creating them. These ends or purposes are, however, subordinated to a higher end which is extrinsic to them; namely, the service of mankind. Man is at the apex of the hierarchy of creatures. Whereas other creatures are subordinated to him, he is subordinated to none of them, but only to God, and that immediately. He exists for his own sake in this sense, that his ultimate intrinsic end is identical materially with the absolute last end of all creation, the glory of God. And God's glory, so far as man is concerned, consists in man's achievement of his destiny, which is nothing else than the perfect possession of God, as far as that is accessible. Through the gratuitous and infinite benefit of the Divine liberality, man is destined to find his supernatural happiness in that intuitive vision of God which is a participation in God's own beatitude. It is true that, in the supposition that man had been left by his Creator in the merely natural order, he could never have attained this destiny. It belongs to the supernatural order, and is attained only through baptism and final perseverance in grace. But it is also true that the supernatural order is now the actual order which was restored for all mankind by the Redemption, and which is made known to all mankind by Divine supernatural revelation. It has not destroyed

the natural order as established by creation; in fact, has taken nothing away from it, but has repaired and elevated it. It remains, therefore, still actually true, as is commonly taught in Catholic ethics, that the natural indicative criterion of morality is rational human nature as such adequately considered; that is, considered with all its properties, tendencies, and needs; with all its relations toward other creatures, and especially toward God—in a word, considered as part of the natural order established by God for the purposes intended by Him in the creation of the universe.

Now, a cardinal feature of that natural order is that man is subordinated to God, and immediately so. From this essential feature of the natural order flow the precepts of the Natural Law which are grouped under the fifth commandment.

For in the first place man is subordinated to God. He belongs to God absolutely and just as completely as does any and every other creature. Hence his right over his own life is more properly called *dominium utile* than *dominium perfectum*. He has the right to the use of his life rather than to the absolute disposal of it. In relation to his Creator, he has not, strictly speaking, a right to his life, but rather the duty to preserve it just as long as God, the Supreme Master, wishes it to be preserved. This is the ultimate reason why suicide is contrary to the Natural Law. God reserves to Himself the ultimate control over human life.⁴⁹

Secondly, as regards other men, everyone has a right to his own life, just because man's subordination to God is immediate. By reason of man's free moral nature it is an essential prerogative of every individual to order his own life according to the natural standard of morality, through the right use of his own faculties, especially those highest ones, his intellect and free will. As means to this end, there is indicated in the very order of nature a relation of

⁴⁹ This is substantially the reasoning of St. Thomas, I^o II^o, q. 64, a. 5. Cf. also Taparelli, *Saggio Teoretico di Diritto Naturale*, Lib. 1, n. 275; Vermeersch, *Theologia Moralis*, Vol. 2, n. 320.

prevalence or dominion of every human person over the things that are by nature subordinated to him for the attainment of this end. Among these certainly is his own life; and that is why the right to life is among those "unalienable rights" with which all men are "endowed by their Creator," according to the sound moral doctrine of the Declaration of Independence.

Hence Vermeersch gives the following definition of right: "Right is the inviolable autonomy of a person and the inviolable relation of prevalence or dominion over the things which are subordinated to the person for the attainment of his last end."⁵⁰

Since a person exists for himself—that is, under God for the attainment of his own last end—he must be morally inviolable. He can never be used as a mere means for the good of others. And in order to exist effectively for his own last end he must have certain things inviolably bound to himself, as means to attain his end. The bond between these means and himself is one of subordination. On his side it is one of prevalence or dominion. Right, therefore, according to the definition, consists of two elements together: first, the inviolable autonomy of the person forbidding that he be completely subordinated to any other or others to the detriment of his own freedom to attain his last end; and secondly, the inviolable prevalence or dominion of the person over certain things which are subordinated to him—among them, his physical integrity and his life.

From this fundamental concept of human right, Vermeersch draws the following conclusions:

First general principle: Private persons as such are in their mutual relations equally inviolable, without any regard to merit or demerit, consent or want of consent. Hence no wrong-doing and no renunciation of rights, either formal or virtual, can destroy or diminish that inviolability. Hence:

⁵⁰ *Theologia Moralis*, Vol. 2, nn. 340, 341.

1. No one may use another person as a mere means to his own advantage.
2. No one may intend or choose harm to another person, but at most may permit it for just cause; so that every harm to another which follows as a consequence upon a voluntary human act is either entirely unjustifiable, or can be justified only on the principle of the double effect.⁵¹
3. Conflicts of rights, as they are called, can arise only in regard to rights or goods which are alienable, such as can be possessed by several persons and pass from one to another.⁵²

The further specification of these principles with a view to their application to our matter will now be in order.

First, the consent of the victim evidently cannot [nullify] the guilt of homicide; for that crime is a violation, not merely of the victim's right (*dominium utile*) to his life, but is moreover a violation of God's supreme dominion (*dominium directum*), which the victim's consent can in no way alienate.

This constitutes no exception to the universal rule, *Consentienti non fit injuria*. For, as Vermeersch elsewhere remarks, "Whoever possesses a right can always validly by his consent bring it about that the note of injustice to himself be removed from the act of another, even though that act remain for other reasons illicit."⁵³ Thus Saul's armor-bearer, if he had killed his master at his own request,⁵⁴ would, it is true, have been guilty of no injury to the King, for the latter's consent would have been effective to purge the act of this particular malice; but nevertheless the armor-bearer would have been guilty of murder before God.

Secondly, no "conflict of rights" can make the killing of one person by another private person licit. A conflict of rights arises

⁵¹ This important principle which is the hinge of our solution, is explained later. Cf. p. 41.

⁵² Vermeersch, *Theologia Moralis*, Vol. 2, n. 590.

⁵³ *Theologia Moralis*, Vol. 1, n. 345.

⁵⁴ 1 Kings 31, 4.

when two or more persons may claim a right to the same thing. But how can one person claim a right to the life of another? By the Law of Nature (which expresses God's will), the supreme dominion belongs to God; the *dominium utile* evidently belongs exclusively to that person whose life is in question. This right is inalienable, not because the person cannot, by his consent, purge an attack by another upon his life of the note of injustice—this, as we have seen, can always be done—but because the thing itself is naturally incapable of possession by any other person, and hence any claim of right to its possession by another is simply meaningless.⁵⁵

Thirdly, it is wrong to deprive another of his life, even in order to confer upon him benefits of a higher order. Thus, it is never allowed to remove a living non-viable child from the womb, solely in order to baptize him, even though unless this is done he must soon die in the womb without baptism. This is forbidden by the Natural Law, not merely because of the danger of abuse or mistake. The principle must be rigidly adhered to even in cases where the supernatural benefit to be derived from the act is absolutely certain. The reason is that what the Natural Law commands in God's name, is not merely the attainment of certain ends, but the *observance of the order of nature as a means to their attainment*. God has instituted the order of nature as a means; we must trust His wisdom that it is the proper means; and we are directly bound by His will to its observance.⁵⁶

⁵⁵ We are aware that this very fundamental point in our reasoning places us in conflict with several respectable authors who justify direct killing in self-defense on the theory that the person attacked "acquires a right to the life" of the aggressor. Thus Taparelli in *Saggio Teoretico di Diritto Naturale*, Lib. 2, nn. 361, 387, 388: "L'assalto ha il diritto sulla vita dell'aggressore." We prefer, however, to base the justification for killing in self-defense upon the principle of the double effect in accordance with the reasoning of St. Thomas. Cf. p. 48.

⁵⁶ Vermaersch makes this point forcibly in *Theologia Moralis*, Vol. 1, n. 249.

Much less can harm to one person be intended by another as a means to his own advantage. This follows directly from the principle that private persons are as such equally inviolable.

Principle of the double effect.—We have seen that "every harm to another which may follow as a consequence upon a voluntary human act is either entirely unjustifiable, or can be justified only on the principle of the double effect." This cardinal principle remains to be examined, and we shall examine it in the teachings of St. Thomas and of Cardinal De Lugo.

These two authorities are surely *omni exceptione majores*, and they quite agree on the conditions requisite for the use of the principle. They differ indeed in their opinion on its application to the case of killing in justifiable self-defense; but that is not our question, since the unborn child, whether in the uterus or in the tube, can never be considered as an unjust aggressor, and the question of direct killing in self-defense does not arise.

St. Thomas.—St. Thomas in the *Summa*, II^o II^o, q. 64, a. 7, puts the question "whether it is allowed to kill another in defending one's self?" In answering it, he gives the first place as usual to objections against the solution he intends to propose. The first and second of these objections seem to deny the licitness of self-defense upon the authority of St. Augustine. St. Thomas then proceeds as follows:

I answer that there is nothing to prevent one act from having two effects, of which the one is in the intention of the agent, the other beside his intention. Now moral actions receive their character according to what is intended, not from what is beside the intention, since that is *per accidens* as has been stated. From the act of a person defending himself a twofold effect can follow: first, the saving of one's own life, secondly, the killing of the aggressor. Such an act, therefore, inasmuch as what is intended is the conservation of one's own life, has no illicit character; since it is natural to every being to preserve its life as far as possible. Nevertheless an act which proceeds from a good intention may be rendered illicit if it is not proportioned to the end intended.

Hence if one uses greater violence than is necessary in defending his own life, his act will be illicit. But if with due moderation he repels the violence offered him, his defense of himself will be licit: for according to law it is allowed to repel violence with violence, observing the moderation of a blameless self-defense. Nor is it necessary to salvation that a man when attacked should forego such an act of moderate defense in order to avoid slaying the aggressor; for a man is under a stricter obligation to protect his own life than another's.

Yet, since it is unlawful to kill a man except by public authority for the common good, as explained above, it is therefore wrong for a man to *intend to kill* another as a means to defend himself, except in the case of one invested with public authority, who, in intending to kill another in defense of his own life, refers the act to the common good, as for example when a soldier fights against the enemy or an officer of the law against robbers. Yet even these would commit sin if they acted on motives of private spite.

Cardinal Cajetan's commentary upon this text emphasizes the very point that we wish to emphasize; namely, that St. Thomas explicitly recognizes the principle of the double effect, and solely by virtue of that principle justifies the act of self-defense which results in the killing of an unjust aggressor.⁵⁷

⁵⁷ "In articulo septimo ejusdem quæstionis sexagesimæ quartæ, intellege bene distinctionem litteræ, scilicet quod dupliciter potest referri occisio alterius ad conservationem vite proprie: primo ut medium ad finem; secundo ut consequens ex necessitate finis. Et, ut in littera dicitur, multum interest altero modo se habere. Nam et finis et medium in finem cadunt sub intentione: ut patet in medico qui intendit sanitatem per potionem vel dietam. Id autem quod consequitur ex necessitate finis non cadit sub intentione, sed præter intentiæm existens emergit: ut patet de debilitatione ægroti quæ sequitur ex medicina sanante. Et juxta duos hos modos diversimode occidere potest licite persona publica, et privata. Nam persona publica, ut miles, ordinat occisionem hostis ut medium ad finem subordinatum bono communi, ut in littera dicitur: persona autem privata non intendit occidere ut seipsum salvet, sed intendit salvare seipsum, non destitutus a sua defensione etiam si alterius mortem ex sua defensione oporteat sequi. Et sic ite non occidit nisi per accidens: ille autem per se occidit. Et propterea ad illud

It is true that some noted theologians have insisted on placing quite a different interpretation on this text of St. Thomas.⁵⁸ Without entering into a lengthy discussion of the point, it is enough to observe that the objection to self-defense which St. Thomas himself cites from St. Augustine, is really answered only if we give to St. Thomas' text the obvious interpretation which we have given it.⁵⁹ Besides the fact that this interpretation is obvious and really necessary, it is the commonly accepted interpretation.⁶⁰

It follows that St. Thomas not only accepts the principle of the double effect, under the requisite conditions which we shall presently gather from his text, but also that he applies it as the only ethical solution to the case of self-defense. With the latter point we are not directly concerned, except as it shows the length to which that well-known principle might, in the judgment of the prince of theologians, be carried in its application.

We shall now analyze the text already cited from St. Thomas, and show that it contains the four conditions commonly required in order to exempt an agent from accountability for an evil consequence "which he foresees will result from his action.

requiritur publica auctoritas, ad hoc non." —S. Thomae Aquinatis, *Opera Omnia*, Vol. 9; *Commentaria Cardinalis Cajetani in P^o IP^o*, q. 64, a. 7.

⁵⁸ Cf. Soto, Lib. 5, q. 1, a. 8; Lessius, Lib. 2, Cap. 9, dub. 8, n. 53. Also the articles of Bishop Waffelaert in *Nouvelle Revue Théologique*, Vol. 9, p. 83; Vol. 11, p. 311; Vol. 16, p. 94; Vol. 17, p. 61, etc.

⁵⁹ St. Augustine wrote:

"De occidendis hominibus ne ab iis quisquam occidatur, non mihi placet consilium; nisi forte sit miles, aut publica functione teneatur, ut non pro se hoc faciat sed pro aliis, accepta legitima potestate, si ejus congruat personæ." —*Ad Publicolam*. And elsewhere: "Quomodo apud divinam providentiam a peccato liberi sunt qui pro his rebus quas contemni oportet, humana cœde polluti sunt?" —*De Libero Arbitrio*.

⁶⁰ In addition to the semi-official commentary of Cajetan, we may cite De Lugo, *De Justitia et Jure*, Disp. X, n. 148; St. Alphonsus Liguori, Lib. 3, nn. 380, 483; Vacant-Mangenot, *Dictionnaire de Théologie Catholique*, Vol. 4, col. 228; Vermiersch, Vol. 2, n. 607; Lehmkühl, Vol. 1, n. 993.

In the first place, such an evil consequence must not be intended either as an end or as a means to the end desired. "It is wrong," says St. Thomas, "for a man to intend to kill another, as a means to defend himself, except in the case of one invested with public authority." *A fortiori* the evil may not be intended as an end, for its own sake.

Secondly, the act from which the double consequence results must be proportioned to the end; that is, to the only end which is directly intended—namely, the good effect for whose sake the act is done. This St. Thomas expresses when he says, "An act which proceeds from a good intention may be rendered illicit if it is not proportioned to the end intended." This requires that the act be such as to lead to the good effect actually intended, with at least as much efficiency and directness as it leads to the bad effect which is foreseen but not desired. Theologians commonly express this requisite by saying that the good effect must flow from the act at least as proximately as the bad effect does.

Thirdly, it is requisite that the act done be not one that is forbidden precisely in order to avoid the bad effect in question. That this requisite condition exists in the case of blameless self-defense, the Holy Doctor affirms by saying: "It is not necessary to salvation that a man when attacked should forego such an act of moderate defense in order to avoid slaying the aggressor."

Fourthly, there must be a proportionately grave reason for doing the act in spite of its foreseen but undesired consequence. This is suggested as a requisite condition in the passage which states that the act must be proportioned to the end; it is also evident from the entire context and the circumstances of the case which is being discussed. For in the case of necessary self-defense there is certainly the gravest reason for urgent action. Common sense itself would forbid an act from which it was foreseen grave evil consequences would follow, even though those consequences were undesired, unless the reason for acting in spite of them was urgent, or, as this requisite is commonly expressed, unless there is a proportionately grave reason for acting. The proportion to be looked to is between

the good and the evil effect, or between the good end desired and the bad consequence accepted in the doing of the act. To determine in practice whether this condition is present is one of the hardest practical problems in moral theology.⁶¹

De Lugo.—Cardinal De Lugo does not explain the principle of the double effect in connection with self-defense, since he holds that the killing of an unjust aggressor is allowed even as a means directly chosen for the end of preserving one's own life; and such direct choice of the evil effect, even merely as a means, places the case outside the scope of the principle of the double effect.⁶² But he explains the principle in several other passages where he is discussing the "indirect" killing of one's self or of another who is not an unjust aggressor. He begins by stating the general principle thus:

Let us proceed to the second way in which an innocent person may be killed, that is indirectly and beside the intention of the agent, a case in which all agree that it is sometimes allowed, for a most grave reason. The common example is when in war, in order to gain the victory and rout the enemy, it is necessary to bring an engine of war into action against a citadel in which some innocent persons must lose their lives together with the actual combatants: in which case all concede that the attack is nevertheless allowed... The reason is that although the person who destroys the stronghold, or throws the missile, is physically the cause of the death of the innocent, still he cannot be said to be

⁶¹ Vermeersch gives the following three considerations which enter into the practical solution:

"(a) Consider how far the evil consequence is removed in causality from the act. The nearer it is, and the more surely it will follow, the graver is the necessity that will be required in order to excuse it. (b) consider whether there exists an obligation in justice or charity to avoid the evil effect. (c) Compare the said obligation with the good end expected to be attained by the act, and with the right of the agent to attain that end. If after considering all this, the reason for acting seems a reasonable one there may be said to be a proportionate reason." *Theologia Moralis*, Vol. I, n. 129.

⁶² Cf. de Lugo, *De Justitia et Jure*, Disp. X, Sect. VI, n. 136 *et seq.*

the cause in a human or moral sense, because this is commonly attributed only to one who intends the death. (. .) Thus, one is not said to be the cause of a death, though he did an act from which he foresaw that death would follow, unless he intended it, or was bound in justice to abstain from the act which caused it.⁶³

Here we have from de Lugo at least some of the same requisite conditions for the use of the principle of the double effect which we have already found in St. Thomas. He requires in the first place that the evil effect be entirely excluded from the intention of the agent;⁶⁴ moreover that the act be not prohibited precisely with a view to avoid this evil effect; and that there exist a proportionate, or, as he says in this instance, a "most grave" reason for doing the act in question. Thus the first, third, and fourth of the conditions already named are again met with. The second—namely, that the good effect must follow at least as proximately from the act as does the evil effect—is gathered from succeeding passages, where he shows that the evil effect may not be intended as a means. De Lugo's understanding of the equal proximity of the two effects is best understood from the examples which he himself uses to illustrate it.

"A case which is sometimes proposed..." writes this great authority,

...is whether one who is fleeing from an enemy and from certain death, may pursue his course, when there is in his way on the narrow road a child or a cripple who will be trampled by the galloping horse. Some say not. Others, with more reason, say yes; and it is proved by what has been said, because that action, by its nature and by the intention of the agent, is not directed to the killing of the child or the cripple who lies in the road, but to

⁶³ De Lugo, *De Justitia et Jure*, Disp. X, n. 123.

⁶⁴ This appears even more clearly from succeeding passages, nn. 125 and 126, where life states that the evil effect may not be intended even as a means towards the end desired. It is evident that de Lugo understands this in exactly the same way as St. Thomas.

the saving of one's own life by fleeing along the public road, an act to which he has a right, and it is accidental that there follows the consequence of harm done to a third party, a thing which you did not choose either as an end or as a means, but which you would wish had not come about. That action is, therefore, morally like the burning of a stronghold in war, which cannot be done without the death of innocent persons. The act in our case is just as licit as that one, since it is not more closely connected with the death of an innocent person.⁶⁵

Another example from De Lugo will serve to illustrate the same principle:

From this it may be inferred what the decision should be in regard to a soldier who throws a torch into a powder magazine in order to blow up the enemy's fort, when it is certain that the explosion will kill the soldier himself. As to this case, Lessius, in n. 32 and the following passages, says that the act is licit, because the soldier does not really kill himself, but is killed either by the force of the explosion or by the falling walls, to which dangers he exposed himself not without grave reason, just as Eleazar, in II Machabees killed the elephant, although he saw that he himself would immediately be crushed by the beast in its fall.⁶⁶

"It is of the greatest importance..." he continues,

that in that case you do not kill yourself directly, nor is that your intention, but you do it indirectly and beside your intention. For directly you only wish to kill the enemy, although beside your intention you yourself perish by the same blow or the same fire. But this indirect killing of one's self, for a grave reason, does not seem to be wrong.⁶⁷

These passages are enough to prove that that very weighty authority who has been called "easily the foremost"⁶⁸ after the

⁶⁵ De Lugo, *De Iustitia et Jure*, Disp. X, n. 127. Cf. n. 124.

⁶⁶ *Ibid.*, n. 51.

⁶⁷ *Ibid.*, n. 53.

⁶⁸ *Facile princeps*—St. Alphonsus Liguori.

Angelic Doctor, admits, just as does St. Thomas himself, that an action from which there follows as a necessary and proximate consequence the death of an innocent person⁶⁹ is, under certain conditions, not a direct killing, and is not to be imputed to the agent as such. The conditions are that there be a proportionately grave reason or necessity for the act, and that the good effect which is sought follow at least as proximately as the evil consequence which is foreseen.

The principle of the double effect is, in its application, an extremely subtle principle. There are always some persons who are shocked by it, particularly when it is applied in difficult cases. Nevertheless, the principle is absolutely sound. It stands on its own feet, and justifies itself in the light of reason and conscience. If we have been at some pains to examine the principle also in the light of two of the greatest authorities in Catholic moral theology, it is because it seemed necessary to place this principle on a basis, both of reason and of authority, which should be absolutely impregnable. Accordingly, if an objection to our solution of the problems of ectopic pregnancy be based fundamentally on a failure to understand or a refusal to accept the principle itself of the double effect, then we say simply that that objection is in conflict with the whole trend of Catholic moral teaching for more than six hundred years. It is practically impossible to call that principle into question; and, as we have seen, it may at times be applied to justify the permission of even the gravest consequences, such as the death of innocent persons.

⁶⁹ Although St. Thomas, as we have seen, deals with this matter in connection with the killing of an unjust aggressor in self-defense, still, since he does not admit that the death even of such an aggressor may be directly intended, but only permitted as a consequence of an otherwise lawful act, it is evident that the Angelic Doctor in this connection treats the aggressor just as if he were innocent.

(B) THE FETUS BEFORE THE INFUSION OF THE SOUL

The question as to the precise time when the spiritual soul is joined to the human body is, as all, admit, an extremely obscure and difficult one. Nor is its solution in any way necessary to our thesis.⁷⁰ The theoretical doubt which exists on this point in no way affects the practical certainty of the conclusions we have reached. For, even supposing the fact to be that the soul is not infused into the body until some time after the beginning of embryonic development, still it must be admitted that in the present state of philosophic and scientific knowledge, no one can really be certain of that fact. It is therefore, subjectively, at least probable that the contradictory is true—namely, that the spiritual soul exists in the body from the moment of conception. Every case, therefore, of the direct killing of a child in the womb after biological life begins—that is, after conception—is probably a case of the direct killing of a human being. Therefore it is *certainly* always wrong. The doubt, if any, is one which directly bears upon a fact; and the right use of the principle of probabilism does not allow action in such a case.⁷¹ Subjectively, therefore, the act remains one of direct homicide.⁷²

⁷⁰ In our original thesis a lengthy appendix was devoted to this question, which has been omitted from this edition.

⁷¹ "Cum facti periculum nulla probabilitate opinionis minuatur, dicitur perinde esse in moralibus, agere et exponere se periculo faciendi."—Vermeersch, *Theologia Moralis*, Vol. 1, n. 380. The same principle is approved by Génicot-Salsmans, Vol. 1, n. 375; cf. Vol. 1, n. 68. Also by Noldin-Schmitt, Vol. 1, n. 235. An old authority to the same effect, and in this same connection, is Zaccharias in *Addenda ad Lacroix*, Lib. 3, dub. 4, n. 823.

⁷² It seems to us evident that certainty on the question of the time when the individual soul is infused is impossible in the present state of science and in the absence of a revelation on the subject. Yet the Belgian biologist Canon de Dorlodot, Professor at the Catholic University of Louvain, is so confident that the rational soul is infused, only after about six weeks of fetal life that he believes the fifth commandment, "Thou shalt not kill," should not be appealed to to settle the question of abortion on moral ground. On the other hand, most moralists after Ballerini have so inclined to the opinion that the spiritual soul exists in the fetus from the moment of conception, that they have practically neglected the contrary

We shall now examine the objective morality of an act directly destructive of fetal life *in the supposition* that the fetus were not yet animated by a rational soul. This is what the early theologians meant in speaking of an "inanimate" fetus.⁷³

Shall we with Lehmkuhl call such an act an "anticipated homicide"?⁷⁴ The expression has no strict theological meaning, because if a human person is not yet in existence there is no taking of human life, and the essence of homicide is wanting. Yet the expression arouses a response in our moral sense, and it will be worthwhile to search the foundations of this implicit judgment.⁷⁵

If we consider the whole course of nature in the sense in which we have shown it to be an indicative criterion of morality,⁷⁶ it becomes evident that a fertilized ovum which is destined to become a man, even though it be supposed to be not yet animated by a

hypothesis Cf. Ballerini, Third Edition, 1899, Vol. 2, n. 911; Lehmkuhl, Vol. 1, n. 1003; Ferreres, *Compendium*, Vol. 1, n. 500. While we do not regard the probability of a tardy infusion of the soul quite so favorably as do Vermeersch, Vol. 2, nn. 622, 623 and Cardinal Mercier, *Cours de Philosophie: Psychologie* t. 2, p. 336, we believe that the hypothesis deserves to be considered.

⁷³ The reasoning by which we shall prove that the direct killing of an "inanimate" fetus would be gravely wrong, is the same in substance as that which must be appealed to to prove that the practice of contraception by destruction or removal of the seed before conception, is wrong.

⁷⁴ The same thought, if not the identical expression, has been traced to ancient authorities. Tertullian says, in *Apologitico*, Cap. 9, n. 2: "Homicidii festinatio est prohibere nasci, nec refert natam quis eripiat animam, an nascentem disturbet; homo est, et qui est futurus, et fructus omnis jam in semine est." And Sporer, *Theologia Sacra*, Part IV, Cap. IV, sec. 1, n. 702: "Est enim velut homicidium privatum utpote impeditio vite humanae in materia in qua secundum ordinarium naturae cursum inesse deberet."

⁷⁵ We know of a Catholic doctor who keeps in his clinic a prominent placard displaying the motto: "Respect to the future man." While the future man cannot be the subject of rights, even of the right to life, yet we do owe him respect in this sense, that we must respect the order established by God for the propagation of the human species. The respect due to the matter that is destined to become a man, is the more sacred the more closely that matter approaches the attainment of the end to which it is naturally ordained.

⁷⁶ Cf. p. 43.

spiritual soul and hence not yet strictly a human life, is yet sacred for the same reason and almost to the same extent, as human life itself. For God, who governs all things by His Providence, has, through physical and physiological laws, prepared that material, and is gradually evolving it to that state of perfection where it will be the fit subject for the infusion of a spiritual soul of His immediate creation. Although that material is not yet a man, and can as yet have no rights, yet God has rights in it, just as He will later have rights over the human life which will be formed from it. And in the very order of nature established by Him for the purpose of propagating the human race, His sovereign will that those rights be respected, is clearly read. We respect the "rights" of God when we respect the order of nature established by Him to fulfill His plans. Hence it is a violation of the Natural Law to interfere with a human embryo; even before the infusion of the soul, in such a way as to prevent it from reaching the development which God, by the Law of Nature, has destined for it.

It is opportune to apply the same reasoning to a physical act which is one step farther removed from the full development of a human life; namely, to the act of marital intercourse. Since the human embryo comes from the union of the semen and the ovum, marital intercourse being the naturally and therefore divinely ordained means to that union, it follows that marital intercourse is designed by Almighty God for the primary purpose of propagating the human race; and that to use it in such a way that that primary purpose is positively excluded, is always gravely wrong as contrary to the Law of Nature. Hence Vermeersch, after proving the gravity of the sin of birth control from the infallible moral teaching of the Church, confirms his proof by these same natural considerations.

For when the marital act is performed in that way, the husband and wife are, as it were, doing the act *as individuals* and in their own right, whereas it is by its nature an act *of the species* to be performed by the parties as representing and acting for the human race. Such an act (when improperly done), therefore,

contains a substantial and essential violation of order, since it is contrary to the right order of the entire generative faculty."⁷⁷

Artificial birth control, therefore, and the same must be said of voluntary pollution, is a sin against nature, because it frustrates an operation which by its very nature tends to the multiplication of the human race, and hence is ordained to the good of the species. That order may not voluntarily be perverted. It is evident that this reasoning applies *a fortiori* to the act of feticide, even if we suppose that the human rational soul is not yet present; for by that act the same order of nature for the propagation of the race is disturbed in a yet more grave and violent manner. Feticide, therefore, if we suppose the soul not yet to be present in the fetus, is a grave sin of the same general species as self-abuse, onanism, or artificial contraception—that is, against the sixth commandment: "Thou shalt not commit adultery."

This doctrine is traceable through a long line of those ancient moralists who dealt with the hypothesis of an "inanimate" fetus. As space will permit no comment, we shall simply make a few brief quotations from a series of well-known Catholic moralists, with references.

Gury:

Abortion, in case the fetus is animated, is homicide in the strict sense; if the fetus is inanimate, it is anticipated homicide. For

⁷⁷ *Theologiae Moralis*, Vol. 4, n. 69. To exactly the same effect are the words of *A Pastoral Letter to All Their Flocks, from the Archbishops and Bishops of Scotland, on a Grave Moral Evil* (Lent, 1927, Oliver and Boyd, Edinburgh):

"In the practice of birth control we have the perversion of a natural faculty, which was ordained by the Creator for one purpose (...) the procreation of children, but is deliberately employed for a contrary purpose. The appetite or tendency is indeed gratified, but the end intended by nature is frustrated. The act is therefore immoral, as being clearly a violation of the law of Nature, and of the law of God, the Author of nature."

even before the infusion of the soul the fetus is destined to form a man.⁷⁸

Busenbaum:

Whoever maliciously procures an abortion in herself or in another commits a grave sin. The reason is that if the fetus is animated the act is a real homicide; if the fetus is not yet animated, the act tends to the killing of a man, and is against the nature of generation.⁷⁹

Lessius:

[Direct killing of a fetus] is not allowed after the infusion of the soul, because one may not directly kill one human being to save another; nor is it allowed even before the infusion of the soul, because to procure an abortion for the sake of health is wrong, just as it is wrong to procure a pollution for the same end. Both are contrary to the nature of generation.⁸⁰

St. Alphonsus:

It is certain that to expel a fetus even though it be inanimate, is *per se* a mortal sin; and the person guilty of it is responsible for homicide, . . . because, although he does not destroy a human life, yet his act has a close causal connection with preventing a human life. The question is raised whether, when a mother is in an extreme illness, it is lawful to give her medicine whose direct effect is to expel the inanimate fetus. One opinion says it is. But a second opinion more commonly held says that, while it is lawful for the mother to take medicines whose direct effect is to cure the illness, even though *indirectly* the fetus be thereby expelled; yet it is not lawful to take medicine for the *direct* purpose of expelling the fetus. The reason is that, if it is never allowed to expel the semen, even though death be feared as a result of its superabundance in the system, much less will it be allowed to expel the fetus, which is nearer to being a human life than is the

⁷⁸ Gury-Ballerini-Palmieri, 1907, Vol. 1, n. 407.

⁷⁹ In text of St. Alphonsus Liguori, Lib. 3, n. 394, Gaudé edition.

⁸⁰ *De Justitia et Jure*, Lib. 2, Cap. 9, n. 61.

semen. And it will not do to say that an inanimate fetus is part of the mother; for the answer is that the fetus does not form part of the body of the mother, but is a distinct human individual in an early stage of development.⁸¹

Molina:

Abortion is sometimes committed after the fetus is animated with a rational soul, in which case alone there can be question of homicide, since before that time the fetus is not a man, and only the killing of a human being is homicide. Sometimes, too, it is committed while the fetus is not yet animated with a rational soul. And although in such an abortion there is no homicide, it is nevertheless a grave sin, and in its way is against the fifth commandment, if voluntary, inasmuch as it prevents the generation of a human life.⁸²

Lacroix adopts the words of Busenbaum which we have already quoted: "Because it tends to the killing of a man and is against the nature of generation."⁸³

Zaccharias:

In no case is it allowed directly to procure such an abortion, even though it be known for certain that the fetus is not yet animated. The reason is that pollution directly procured is never licit; therefore much less will abortion be allowed. The consequence of this argument is proved by Lessius and Molina, who give two reasons: first that abortion is much more contrary to the end designed by nature, since it destroys a twofold germ of life (to wit the male and the female) and a generation which has already begun; secondly that the semen and its activity is not so much ordained to the good of the individual as to the preservation of the species as a whole; and it is to the destruction of the species if the seed be spilled outside its proper vessel.⁸⁴

⁸¹ Gaudé edition, Lib. 3, n. 394.

⁸² *De Justitia et Jure*, T. 4, disp. 27, n. 1.

⁸³ Lib. 3, dub. 4, n. 822.

⁸⁴ Lacroix, *loc. cit.*, *Addenda*, n. 823.

De Lugo:

[D]irect abortion after infusion of the soul is wrong] because after animation this would be directly to kill a child, which is never allowed. Before animation it is not allowed to procure an abortion directly, just as it is not allowed to procure the effusion of seed, even to save one's life. For it must be observed that as nature reserves to herself the administration of the semen, so does it also of the fetus; and denies to the parents the right to dispose of the one or the other except to the end of generation which is intended by nature herself; for any power granted to them beyond this might easily involve consequences contrary to the end of generation.⁵⁵

Sporer:

The true opinion is that it is never allowed. The best reason is drawn from the similar case of pollution or the voluntary effusion of seed, which is in no case ever allowed even in a case such as ours, to save the life of a human being in extreme danger. And what is the reason for this? Is not this the one commonly given, that to procure a pollution is against the natural purpose of the seed, which nature *per se* intends—namely, the generation of children? Now, to procure the abortion of a fetus already conceived, even though it be not yet animated, is equally, nay even more, contrary to the end of generation, an end which in this instance is not only *per se* intended by nature, but is already actually in process of attainment and near fruition. Therefore *a fortiori* it will never be allowed to procure an abortion, even for the sake of saving the life of the pregnant woman.⁵⁶

Vasquez:

This is wrong in itself and contrary to nature, just as to spill the seed outside its vessel.⁵⁷

⁵⁵ *De Justitia et Jure*, Disp. X, nn. 130, 131.

⁵⁶ *Theologia Sacra*, Pars IV, Cap. IV, sec. 1, n. 704.

⁵⁷ Cap. 3, 2, dub. 6, n. 26. The citations given represent the weight of authority on the question. There were, it is true, a few dissentients, as to the *inanimate* fetus. Some respectable authors held that the direct expulsion of the fetus *before the*

Enough has been said to show that the expression "anticipated homicide," while it does not give the strict theological reason for the guilt of abortion, suggests the true reason which these grave authors explain. We may therefore conclude, with Vermeersch:

Even if the fetus is not yet animated with a rational soul, it may not be directly expelled without incurring guilt similar in kind to, though graver in degree than, that which is incurred by pollution or an onanistic use of marriage. For in both cases, even though there were question of securing physical health, a faculty which is given to us immediately for the good of the species is directed to the good of the individual, contrary to the order indicated in human nature. It is therefore a sin against nature.⁶⁸

All this is in perfect accord with a very old tradition in the Church. We may recall the saying of St. Basil: "Let her who purposely destroys a fetus suffer the penalty of murder. For, into the subtle question whether the fetus was animated or not, we do not enter."⁶⁹ Pope Sixtus V quotes St. Jerome to the same effect:

With too great insolence does he oppose God's will who, as St. Jerome says, 'whilst nature receives the seed, nourishes it, gives it a body, and differentiates that body into various members, whilst within the narrow enclosure of the womb the hand of God is ever at work—for it is the same Creator who fashions the body

infusion of the soul might be permitted for grave cause. This appears to have been the opinion of Sanchez, *De Matrimonio*, Lib. 9, disp. 20, n. 9; Laymann, Lib. 3, Tr. 3, Pars 3, Cap. 4, n. 4; Navarrus, *Man.*, Cap. 25, n. 62; Viva, *In Propositionem 34 Innocentii XI*, n. 9; and even of St. Antoninus, Pars 3, Tit. 7, Cap. 2, n. 2. As far as we know, however, authorities were always unanimous in condemning as a grave sin the voluntary expulsion of seed outside marital intercourse, and the voluntary destruction or expulsion of the male semen by the wife after intercourse so as to prevent conception. In view of this unbroken line of authority, we are unable to understand the contention of some learned writers who recently have attempted to cast doubt on the validity of this traditional argument. If that argument is invalid the whole line of Catholic moral teaching is at fault—a hypothesis which we do not consider possible.

⁶⁸ *Theologia Moralis*, Vol. 2, n. 623.

⁶⁹ In *Epistola Canonica ad Amphiliacum*, n. 2.

and the soul—too insolent I say is he who thus impiously disregards the goodness of the Potter, that is of God, who fashioned the human vessel, created it, and willed its existence.⁹⁰

Finally, the astute genius of St. Augustine discerned in this matter the close and mysterious connection between impurity and cruelty, lust and homicide.

Sometimes this lustful cruelty, or cruel lust, goes as far as to seek out poisons that produce sterility; and if that fails, [the guilty one] in some way extinguishes and destroys the fetus conceived in the womb, desiring that her child shall die rather than live, or if it already lives in the womb, that it be killed before it is born.⁹¹

Therefore in spite of those few moralists who used to hold that the destruction of an inanimate fetus was licit, the contrary opinion may be considered as fully proved both from reason and authority: it is always a grave sin *directly* to expel the fruit of conception before viability. And whether the fetus be animate or inanimate, the reasons why the act is wrong are not fundamentally so very different, although it is certain that only an animated fetus is a human person. Of course the *indirect* expulsion or killing of an inanimate fetus may at times be allowed, no less than that of an animated one; that is, whenever there are present the conditions which are required for the application of the principle of the double effect.

⁹⁰ From the Apostolic Constitution *Effrenatum*, October 29, 1588; Gaspari, *Festae Juris Canonici*, Vol. 1, n. 165.

"Nimis enim impudenter contra Dei voluntatem se opponunt, qui, ut S. Hieronymus ait, 'dum natura recipit semen, receptum confovet, confutum corporat, corporatum in membra distinguit, dum inter ventris angustias Dei manus semper operatur, idemque corporis Creator et animae est, impie despiciit bonitatem Figuli, id est Dei, qui hominem plasmavit, fecit, et voluit."⁹²

⁹¹ *De Nuptiis et Concupiscentia*, Lib. 1, Cap. 15.

SUMMARY OF PRINCIPLES

Thus we have all the principles that are needed for the solution of our problem.

First : If there is question of an animated fetus, and therefore of a human person, every direct killing is gravely wrong as being contrary to the essential inviolability of the person which can neither be forfeited nor renounced. Direct killing of an animated fetus is murder.

Secondly : If there is question of a fetus which is supposedly *not yet animated by a spiritual soul* (though of course biologically *alive*), its direct destruction will likewise be always gravely wrong ; not that a human person is killed, for in the supposition that the rational soul is not yet present that cannot be strictly said, but because the order established by God for the propagation of the human race is disturbed, and hence a sin is committed against the sixth commandment, *of the same general kind as onanism, but the more serious in degree as the matter whose organization is violently destroyed has in that case already approached the more closely to the attainment of its natural term, the production of a human being.* Thirdly : Whether there is question of an animated or of an inanimate fetus, its *indirect killing* or destruction, permitted for a good and proportionately grave reason, may at times, by virtue of the principle of the double effect, not be imputable to the agent. It will not be blameworthy provided (1) that it be in no way intended or chosen even as a means to a desired end ; (2) that the act from which it follows as a consequence be not prohibited for the very purpose of preventing that consequence ; and (3) that there follow from the same act, at least as proximately, also a good effect which is proportionate to the permitted evil consequence.

CHAPTER IV

SOME FALSE OR INADEQUATE SOLUTIONS

AMONG the false or inadequate solutions of our problem which have been proposed, are the following:

1. An ectopic fetus, from the very fact that it constitutes a grave danger to the mother's life, may be regarded as at least a materially unjust aggressor against her life, and since such an aggressor may, according to most authorities, be directly killed as a means toward self-defense, the ectopic fetus may in the same way be killed directly.
2. Since the fetus cannot possibly live beyond a very short time even if he be left within the mother, his consent to having his life shortened by that brief interval of time in order to save his mother's life, may be reasonably presumed.
3. In the conflict of rights which in such cases arises between the right of the fetus and that of the mother, since one right must necessarily yield to the other, the right of the fetus, as being the weaker right of the two, should yield to the stronger right of the mother.
4. Finally, since it is commonly held that it is permissible to remove a uterus which is affected with a deadly cancer, even when there is contained in it a living and non-viable fetus, there being a perfect analogy between that case and that of a pregnant tube, the excision of the tube should be allowed *a pari*, though it contain a non-viable fetus.

On the other hand, against the licitness of the operation, it is sometimes insisted that the responses of the Holy Office interpose

an impassable barrier, inasmuch as these responses must be understood as declaring the removal of a non-viable ectopic fetus absolutely prohibited under any possible circumstances.

It is the purpose of the present chapter to dispose briefly of these arguments in the order in which they have been proposed, except that the consideration of the solution attempted from a supposed parity with the case of a diseased uterus will be deferred to the last.

1. IT IS NEVER ALLOWED TO KILL THE FETUS DIRECTLY AS AN UNJUST AGGRESSOR.

It is absolutely criminal directly to kill any fetus whatever as an unjust aggressor. In this conclusion all authorities now agree, although not so long ago it was warmly disputed among moral theologians. The difficulty came precisely from the fact that according to a fairly common opinion—which we, for intrinsic reasons, decline to admit—it is allowed to kill even directly an unjust aggressor upon one's life and it makes no difference whether the aggressor be formally unjust or only materially so, as in the case of a drunken or insane person whose is a serious menace to one's life.

Relying on this principle, there were theologians who applied it both to the uterine and to the extra-uterine fetus. Among those who applied it to the uterine fetus, the principal ones were those who actually permitted craniotomy.⁹² In fact this was the chief argument of the craniotomists. After the decree of the Holy Office of May 28, 1884, which declared that "it may not safely be taught" that craniotomy is licit even to save the life of the mother, it could no longer be held that a uterine fetus could be killed as an unjust

⁹² In addition to the authors mentioned in Chapter I, even Ballerini was accused by Eschbach, in the latter's *Dissertationes Physiologico-Theologicae*, of having used this argument in the earlier editions of his work. To us it is perfectly clear that he held the contrary. Cf. Gury-Ballerini-Palmieri, *Compendium* (1907), Vol. 1, n. 403, notes 13 and 14, and the larger edition of Ballerini-Palmieri (1899), Vol. 2, n. 921. Father Matharan controverted Eschbach's accusation in *Nouvelle Revue Théologique*, Vol. 17, pp. 410, 551.

aggressor. Yet that decree was far from putting an end to the use of the argument. For a few years later, when the controversy arose regarding the ectopic fetus, Sabetti, an excellent theologian, who had entirely rejected the argument as applied to a uterine fetus, did not hesitate to regard an ectopic fetus as an unjust aggressor, and contended that as such it could be directly killed.³³ Opposed to him in that discussion were Lehmkuhl, Aertnys, and Eschbach; but the issue might have remained doubtful had it not been for the timely decrees of the Holy Office of May 4, 1898, and May 5, 1902.³⁴ The theory which compared the ectopic fetus to an unjust aggressor cannot possibly be reconciled with these two decisions, and it has consequently been entirely abandoned.

Yet, considering merely the intrinsic reasons pro and con, one must admit that, as long as that principle is granted which allows the direct killing of a materially unjust aggressor on private authority, it will be very difficult to take the ectopic fetus outside the operation of that principle. It is far from easy to indicate the difference between a morally irresponsible aggressor and the child who is unwittingly causing a deadly peril to its mother. It is evidently beside the point to say that the child is not responsible, for neither is the maniac.

The old authors, so far as we have been able to discover, gave no intrinsic reason. They spoke only of uterine fetuses, and distinguished between the animate and inanimate. Some held the direct expulsion of an inanimate fetus in case of necessity licit on the ground that it was an aggressor upon the mother's life. While the majority denied this, and while all denied it in the case of an animated fetus, yet they failed for the most part to assign any reason based on an intrinsic difference between such a fetus and an irresponsible aggressor.

³³ Cf. *New York Medical Record*, November 28, 1885; *Ecclesiastical Review*, Vol. 11, p. 129; Vol. 9, p. 358.

³⁴ Cf. Chapter II.

Thus, De Lugo⁶⁵ begins by admitting a certain quality of aggressor in the inanimate fetus which is putting the mother's life in danger; and although he does not admit that it may be directly ejected or killed, he gives as a reason for his conclusion only the indirect one that if it were allowed, then direct abortion even of an animated fetus should also be allowed, since in case of aggression it could make no difference whether the aggressor were animated with a soul or not. This is a valid argument, but an indirect one. It is about the only argument you will find in the old authors on the question of regarding the fetus as an aggressor. The difficulty of assigning directly a specific difference between the aggression of an irresponsible assailant and the danger caused unwittingly by an ectopic fetus was keenly felt by the theologians who opposed Sabetti on that point in the discussion referred to in our historical chapters. Ballerini felt the same difficulty even as regards a uterine fetus. He met it, however, and gives us what is perhaps the best reason, and one that applies equally to the ectopic fetus.

The difference between the two cases (namely, that of the insane aggressor and the fetus), is perhaps that the maniac, while he is not a formal aggressor from the standpoint of responsibility for his action, is nevertheless a formal aggressor as regards the aggression itself; whereas the child is not an aggressor even from this standpoint. And this is why in the first case self-defense is licit, and hence even the death of the aggressor if that be necessary to self-defense; whereas in the other case there is no ground for defense which would give the right to cause death.⁶⁶

It was practically the same reasoning that Aertnys used in his debate on the question as applied to an ectopic fetus, against Sabetti. "The former..." he wrote, referring to the insane aggressor,

⁶⁵ *De Justitia et Jure*, Disp. X, n. 130.

⁶⁶ Ballerini-Palmieri, Ed. 1899, Vol. 2, n. 921.

...acts under the impulse of his own will, although without moral responsibility, and he does acts which in themselves are unjust as being directly intended to cause death. But the child is making no attempt upon its mother's life; it is only trying to be born, and it is only by a natural concourse of circumstances that this effort becomes a cause of death to the mother. The child, therefore, is not an aggressor, and much less an unjust aggressor.⁹⁷

This is the heart of the matter. It simply cannot be shown that the child is in any way interfering with the order of nature whilst he is striving toward the very end which the order of nature has assigned him. It is true that in ectopic gestation the physical order which nature intended has been deranged, but it is impossible to see how this derangement can be attributed to the child. Like the other physical ills that flesh is heir to, it must be attributed to that original rebellion which deranged the order established by God, and on account of which the woman heard those words of retribution: "I will multiply thy sorrows and thy conceptions: in sorrow shalt thou bring forth children."⁹⁸ The true aggressor against nature is sin.

We need not insist upon our view, drawn from St. Thomas, regarding the true principle which alone can justify killing even in self-defense. We hold that direct killing even in self-defense is unlawful.

If that view be admitted it is evident that direct destruction of the fetus is always wrong, quite regardless of the question whether the fetus is or is not an aggressor. Without insisting upon the point, it is enough to observe that this view, which is supported by the highest authority, at the same time furnishes the most fundamental refutation of the theory which would justify the direct killing of an

⁹⁷ *Ecclesiastical Review*, Vol. 9, p. 354.

⁹⁸ Genesis, 3, 16.

ectopic fetus as an aggressor upon its mother's life.⁹⁹ To sum up the reasons against the solution drawn from this theory:

1. Even if the child were an aggressor, it would be wrong, according to St. Thomas, to intend his death directly as a means to save the mother's life.
2. The child is not an aggressor, because he is trying only to reach the end which nature intends for him, that is, birth.
3. The theory of aggression is incompatible with the decrees of the Holy Office.
4. The theory is now entirely abandoned.

2. THE SUPPOSED CONSENT OF THE FETUS IS EITHER INEFFICACIOUS OR UNNECESSARY.

Since, as we have explained above,¹⁰⁰ God alone has direct and complete dominion over every individual human life, the consent of the child to its own death, even if that consent were established beyond a doubt, could not confer upon any one the right to kill it directly. In the debate of some forty years ago upon this question, *Ærtnys* made this argument briefly and forcibly when he said: 'It makes no difference if the child's consent is presumed, for it is not master of its own life.'¹⁰¹

Ærtnys was here arguing against *Lehmkuhl*. Yet *Lehmkuhl* himself never claimed that the child could consent to the positive and direct extinction of its life. His claim was that the child could consent to deprive himself of a vital element; and to illustrate the point he made use of the old example about the two men clinging to a raft.

⁹⁹ We do not, of course, deny the right of self-defense; but we hold, with St. Thomas, that even in the case of real aggression, the death of the assailant cannot be directly intended even as a means, but only permitted as a consequence of the act of defense, in accordance with the principle of the double effect.

¹⁰⁰ p. 46.

¹⁰¹ *Ecclesiastical Review*, Vol. 9, p. 354. *Waffelaert* has the same observation in *Nouvelle Revue Théologique*, Vol. 16, pp. 379 et seq.

If two men in a shipwreck are clinging to the same plank and it becomes evident that it cannot support them both, certainly one of them may deprive himself of that plank, which under the circumstances is a vital element to him in order to save the other. Therefore it will be lawful for the fetus to deprive himself of a vital element (or, since the fetus is as yet incapable of volition, it will be lawful for another person for him and acting upon his interpretative volition, to deprive him of a vital element) in order that the mother may be saved and that he himself may have a chance of baptism.¹⁰²

Lehmkuhl, therefore, appealed to consent on the part of the child, but it was consent to an operation which he believed could be distinguished from direct killing. It is evidently the same reasoning which he had formerly used in attempting to justify direct abortion upon a uterine fetus. In that connection, he himself afterward repudiated it, calling it "specious rather than true."¹⁰³ The reasons which this great theologian gave for retracting his former opinion were twofold: extrinsic and intrinsic. In the first place, the decree of the Holy Office of July 24, 1895 made his opinion impossible as far as a uterine fetus was concerned. Secondly, on fuller reflection, he concluded that the direct disruption of the membranes and tissues which bind the fetus to the uterus was in reality a direct and mortal attack upon the fetus. As soon as it was evident to him that the case was one of direct killing, the idea of consent on the part of the fetus dropped entirely out of the argument.

Evidently the case is the same whether there is question of a uterine or of an ectopic fetus. In neither case can consent of the fetus solve the problem. For either the operation by which he is removed is a direct killing or it is not. If it is, then the consent of the fetus, actual or interpretative, is of no avail. The child is certainly no more master of his life than is any other human

¹⁰² Ecclesiastical Review, Vol. 9, p. 350.

¹⁰³ Lehmkuhl, *Theologia Moralis*, Vol. 1, n. 1008.

individual; and no human being can make the direct killing of himself licit by consenting to it. On the other hand, if the operation is not a direct killing, the consent of the fetus is unnecessary. The death will then be indirectly produced, or "positively permitted," and will be lawful or not, according as there are or are not presented in the case all the elements necessary to justify the act under the principle of the double effect.

Since the consent of the child is either entirely unavailing, or entirely unnecessary, the argument which attempts to justify his death on that ground may be dropped from consideration.

3. CONFLICT OF RIGHTS AFFORDS NO SOLUTION.

A solution drawn from a supposed "conflict of rights" was invented about one hundred years ago by Nägele.¹⁰⁴ It was developed with much parade of philosophic lore by Apicella¹⁰⁵ and other craniotomists; and it has been thoroughly refuted by Eschbach¹⁰⁶ and Waffelaert.¹⁰⁷

It must be evident that if conflict of rights could effect anything in this matter, it would be to deprive the fetus of his right to life. Once deprived of his right to life he could be killed directly. But direct killing is certainly wrong both in the case of a uterine fetus,¹⁰⁸ and in the case of an ectopic.¹⁰⁹ The solution of the problem from a supposed conflict of rights is therefore wholly discredited. But, aside from these authoritative decrees, the examination of the question in the light of first principles gives the same conclusion.

¹⁰⁴ *De Jure Vice et Necis Quod Competit Medico in Partu*. Heidelberg, 1826.

¹⁰⁵ *La Craniotomie Considerée in Régards à la Morale*, 1879.

¹⁰⁶ *Disputationes Physiologico-Theologicae*, Disp. 4, prop. 7:

"In cassum hodierni auctores aliqui ut embryotomiae aut abortus licitatem defendant, ad principia in jurium collisione servanda appellant, atque immerito jura matris ad vitam præ fetu justibus fortiora esse contendunt."

¹⁰⁷ *Nouvelle Revue Théologique*, Vol. 16, pp. 377 *et seq.*

¹⁰⁸ Holy Office: May 28, 1884; August 19, 1889; July 24, 1895.

¹⁰⁹ Holy Office: May 4, 1898; May 5, 1902.

The solution drawn from "conflict of rights" will be better understood in the light of the following considerations.

1. Quite frequently the term "conflict of rights" is very loosely used. On examination it is found to mean nothing more than a comparison of the social value of the two lives in question; namely, that of the mother and of the child. Such was the instance mentioned above,¹¹⁰ where the doctor opined that "the conscience of the human race" approved the direct sacrifice of the child's life because it was supposedly of less social value than that of the mother. This point of view is far from being extinct in a society where utilitarianism tends to substitute itself for the true objective moral standard. Sometimes the advantage of saving a human life is simply made paramount to the observance of the moral law, on the principle that "the end justifies the means." An apparent justification is sometimes put in these words: "Between two evils, one should choose the lesser. Now the death of one person is evidently a lesser evil than the death of two. Therefore it not only may but ought to be chosen." The answer to this sophism is of course that the death of one person *intended and produced directly by a violation of the moral law* is not a lesser evil than the death of two from natural causes without any dereliction of duty on the part of anyone. The former is a grave moral wrong, which may never be directly chosen for any advantage whatever: *the end never justifies the means*. The latter is a great physical evil certainly, but one which may, nay which must, be permitted (though not directly produced) where it cannot be prevented by lawful means. Every such argument is absolutely contrary to natural morality. It is not temporal utility, but the will of God, which is the ultimate norm of morality. The will of God forbids all direct killing by private authority. Therefore such killing is always wrong.

This reasoning sometimes appears unduly rigid to non-Catholic readers. It may be asked: If the Natural Law comes from the will of

¹¹⁰ P. 15, note 5.

God, who is infinitely good and wishes well to the human race, should not the observance of that law be to man's advantage? And yet, is it not evident that the more advantageous course is, in many cases, direct abortion to save one life instead of losing two? How, then, can this be contrary to the will of the good God?

The objection is a specious one. It is true that the observance of the Natural Law is always to the advantage of the human race *as a whole*; it is also always to the advantage of the *individual* observing the law, if we consider his *true*—that is, his *eternal*—advantage; but it is not necessarily always to his *temporal* advantage. Nor need it be. The process is exemplified in this very matter. The intransigence of the Catholic Church standing almost alone against so many adversaries in defense of the rights of unborn children, has been a great factor in bringing about the advances which medical science itself has made.¹¹¹ Dr. Clement, director of the surgical section of the General Hospital of Friburg, gives us an interesting new testimonial to the progress which medical science has made under this stimulus when he states that "the tendency is in the direction of abolishing therapeutic abortion."¹¹² Has the strict observance of the Natural Law proven beneficial to humanity? It has. Here is the process: At first, the observance of the law is attended with difficulty; owing to inadequate knowledge of surgery or to want of skill, many lives are lost by natural causes which, in the existing state of the science and profession, could not be saved without violating the moral law. Then, largely as a result of the uncompromising demands of Catholic moral teaching, which insists that the *end never justifies the means*, and that the Natural Law may not be violated even to save lives, medical

¹¹¹ De Lee, speaking of the cesarean section, observes, "The Catholic Church had much to do with the habilitation of the operation, since it enabled the rite of baptism to be given to the child."—*Op. cit.*, p. 1059. It must be added that this has not been the sole reason. The right of the child to his natural life has also been considered.

¹¹² *Le Droit de l'Enfant à Naître*, Beyaert, Bruges, 1927.

knowledge and surgical skill advance to the point where they provide new resources, new remedies, or new methods, which save lives without the violation of the moral law. The net result, thereafter realized, is the saving of thousands of lives. The Natural Law has justified itself; but it has also tested the loyalty and exercised the ingenuity of man.¹¹³

2. Since the Natural Law is an ordinance of reason which comes from God, it is no more capable of real internal contradiction than God Himself is. Hence a *real conflict* of natural rights is, strictly speaking, impossible.¹¹⁴ What is called a "conflict of rights" is in reality usually an apparent conflict of duties. A doctor has undertaken the care of a patient; he rightly feels that he has an obligation of justice toward her, and now he finds that it is impossible to save her life without procuring a direct abortion. There *appears to be a conflict* between his professional duty to his patient and the negative duty imposed by the moral law. The conflict is only apparent, because his duty to his patient is fully satisfied when all the means to save her life which the Natural Law permits have been exhausted. Professional ethics can impose no duty to violate the fundamental moral law in order to save a patient. On principle this should be perfectly evident. The difficulty comes from the fact that too many exaggerate the duty

¹¹³ Vermeersch wisely observes that this point of view of the *ultimate utility* of observance of the Natural Law should be insisted on because of its strong humanitarian appeal. Medical men even outside the Church may thus be imbued with a higher regard for absolute moral principles, and will acknowledge how well the Catholic Church has served humanity by vigorously insisting upon the rights of human persons. *Theologia Moralis*, Vol. 2, n. 630.

¹¹⁴ Meyer brings this point out nicely in his *Institutiones Juris Naturalis*, Vol. 1, n. 593. "Quoniam omnis lex sive ethica sive juridica 'ordinatio rationis' sit oportet, omnisque obligandi vis a divina voluntate ultimatum descendit, sine qua nec jus nec officium aliquod firmum esse potest, a priori pro certo habendum est collisionem officiorum vel jurium objective realem nullam esse, sed eam, ubicumque occurrat, mera apparentia constare. Quippe nec recta ratio nec Dei voluntas sibi contradicere et ea quae inter se pugnant, simul praecipere aut rata habere unquam potest."

which public opinion and human laws emphasize, while they minimize the obligation of the moral law whose violation so easily escapes public notice or censure. Often there is no one to speak a word for the silent little life in the womb. In this way a "conflict" of duties is conjured up where there really is none.

3. Finally, in a truer sense, the term "conflict of rights" is used to designate a situation where several persons seem to have a right to the same thing, and it may be hard to determine which one really has the right. Here we need but recall the fundamental proposition that "a conflict of rights, as it is called, can arise only in regard to those alienable rights or goods which are capable of being possessed by different persons and of passing from one to another."¹¹⁵ The reason is evident: the apparent collision of rights, or rather the apparent ground for dispute between two or more persons as to any specific right, necessarily supposes that the thing claimed by the respective parties is at least capable of being possessed by each of them.¹¹⁶ But the life of one person is by nature itself so attached to that person, so clearly subordinated to his use for the attainment of his last end, that it is inconceivable that it should be claimed by any other. Since it cannot in the nature of things be possessed and enjoyed by any other person, all claim to it by any other person is simply meaningless. "Conflict of rights" involving any individual's right to his own life, is an impossibility. Nothing but confusion can result from attempting to base the solution of our problem upon this principle.

EFFECT OF THE DECREES OF THE HOLY OFFICE

There are three decrees of the Holy Office regarding ectopic excisions:

¹¹⁵ Vermeersch, *Thesaurus Moralis*, Vol. 2, n. 590.

¹¹⁶ This radical idea is made clear by the same author in his *Quaestiones de Justitia*, n. 258.

On August 19, 1889, the reply to questions, some of which related to ectopic pregnancies,¹¹⁷ was:

It cannot be safely taught in Catholic schools that any surgical operation which is a direct killing of the fetus or of the pregnant mother, is licit.¹¹⁸

On May 4, 1898:

In answer to III: in case of urgent necessity, laparotomy for the removal of ectopic conceptions is licit, provided serious and opportune provision is made as far as possible for the lives of both the fetus and the mother.¹¹⁹

On May 5, 1902, to the question:

"Whether it is sometimes licit to remove from the mother ectopic fetuses which are immature, before the expiration of the sixth month after conception," the reply was:

In the negative, according to the decree of May 4, 1898 which declares that as far as possible serious and opportune provision must be made for the lives of both the fetus and the mother. As regards the time, let the petitioner remember that according to the same decree no hastening of delivery is allowed unless it be done at a time and in a manner which are favorable to the lives of the mother and the child, according to ordinary contingencies.

This decree lacks the papal approbation.¹²⁰

The question is whether these decrees absolutely prohibit *every removal* of an ectopic fetus before viability, or whether they apply only to such removals as are *directly death-dealing* to the child. If they are to be taken in the former sense, there is an end to our inquiry; the answer must then be that every removal of an ectopic fetus

¹¹⁷ Cf. Appendix.

¹¹⁸ Gasparri, *Fontes Juris Canonici*, Vol. 4, p. 486.

¹¹⁹ Gasparri, *Fontes Juris Canonici*, Vol. 4, n. 1199.

¹²⁰ It is also omitted from Cardinal Gasparri's collection, *Fontes Juris Canonici*. It was published, however, in *Analecta Ecclesiastica*, Vol. 10, p. 337, and will also be found in Lehmkuhl, *Theologia Moralis*, Vol. 1, n. 1010.

before viability is condemned. But we contend that this is not the meaning of these decisions.

We admit in general the binding character of these decisions. As far as their subject matter is concerned, it is evident that they present Catholic doctrine on morals, and they are therefore within the general competency of the Holy Office.¹²¹ From the words of the first decree, "it cannot safely be taught," Eschbach was at great pains to show that it was a *doctrinal decree* in the strictest sense.¹²² The point need not detain us, as we have no inclination to dispute its authority. It contains merely a perfectly clear application of an undoubted principle of the Natural Law; and, although *in form* the decree is not "irreformable,"¹²³ yet it is certainly out of the question to suppose that it will ever be modified. Neither are we inclined to detract one whit from the authority of the other two decrees cited. That of May 4, 1898, was approved by the Holy Father "*in forma communis*." The other, of May 5, 1902, has no papal approbation at all. But it is quite unnecessary to insist on this. We shall rely entirely upon the correct interpretation to be placed upon these decrees, without in the least questioning the authority even of the last.

To begin with, it is clear that these decrees promulgate no new legislation; they are merely applications of the Natural Law to difficult disputed cases. Strictly speaking they should be called declarations rather than decrees.¹²⁴ We admit that their application is universal; if not by reason of their form,¹²⁵ at least from the universality of their subject matter.

¹²¹ Cf. Canon 247§1; Wernz-Vidal, *De Personis*, n. 488; Vermeersch-Creusen, *Epitome Juris Canonici*, Vol. 1, n. 323.

¹²² *Disputationes Physiologico-Theologicae*, pp. 461 et seq.

¹²³ Cf. Wernz, *Jus Decretalium*, Vol. 1, n. 143, note 47; Wernz-Vidal, *De Personis*, n. 489.

¹²⁴ Wernz, *Jus Decretalium*, Vol. 1, n. 144; Choupin, *Valeur des décisions Doctrinaires et Disciplinaires du S. Siège*.

¹²⁵ Wernz, loc. cit.

Now as to their meaning : it is evident that they do not declare *indirect* abortion to be wrong, because according to quite universal Catholic opinion that is not always and necessarily against the Natural Law. The purpose of the decrees was to apply in particular to ectopic conceptions the general declaration made on August 19, 1889, which condemned in a general way the *direct* killing of the mother or the child. This interpretation seems to us perfectly consistent with the general terms in which the declarations are couched, for two reasons. First, neither in any of the questions nor in any of the answers was specific mention made of *indirect* abortion. On the other hand, the expression "to extract ectopic conceptions" can be understood as applying only to such operations as *directly* kill the child. And if they *can* be so understood, they *must* be so understood. The reason for this is that if they are so understood the last two of these declarations are consistent, both with the first declaration, of August 19, 1889, and with the universally accepted opinion of Catholic theologians ; whereas if they are understood in the severer sense, as declaring even *indirect* abortion wrong, they not only restrict the liberty allowed under the first decree, but contradict the common Catholic opinion theretofore held. It is not to be presumed that such a complete reversal of moral teaching would be made by mere implication, without an explicit declaration. Our interpretation of these decrees is therefore reasonable ; whereas the severer interpretation is not.

We admit that this interpretation can be made absolutely certain only by a further authentic declaration of the Sacred Congregation itself. But certainly there is nothing in the declarations heretofore made by the Holy Office which would be inconsistent with a new declaration, if such a one is ever pronounced by it, confirming the interpretation which we have contended for. In the meantime one certainly has the right to insist on the interpretation which seems highly reasonable in preference to one which seems highly unreasonable. This free interpretation of the decrees is in fact confidently adopted by very many authorities. We may cite for it

Davis, Génicot-Salsmans, Arregui, Aertnys-Damen, Prummer, Lehmkuhl, Piscetta-Gennaro, Vermeersch, and Ferreres.¹²⁶

Ferreres¹²⁷ does not even mention the decree of May 5, 1902. But the fact that even after that decree he was far from holding every removal of a non-viable fetus as wrong is abundantly clear from what he says in the passage cited about indirect abortion, and also from the case which he proposes and solves in the appendix to his booklet *De Vasectomia Duplici*, which is dated 1913. Can any reason be assigned why *indirect* abortion should be rigidly prohibited in case of ectopic conceptions, while it is allowed under certain conditions in uterine pregnancies?

It is therefore our opinion that the decrees of the Holy Office do not apply to any operation for the removal of an ectopic fetus which results only indirectly in his death. Let us conclude with the words in which Lehmkuhl expresses his adherence to the same view.

From this later reply¹²⁸ some have concluded that the growth which sometimes appears in various organs of the mother as a result of extrauterine conceptions, and which, unless it is removed, puts her in grave danger, and with the rupture of those organs causes her certain death, may never be excised, for the reason that together with it an immature fetus would be cut out. These authors hold that in such a case both the mother and the child must die. And to be sure the aforesaid decree did offer some ground for this conclusion. However, I do not think that this decree, so understood, need be taken as binding, especially as it lacks the approbation of the Holy See; and still less need it be taken as a law universally binding; but it is to be restricted to

¹²⁶ Davis, in *Ecclesiastical Review*, September, 1927, p. 284; Génicot-Salsmans, *Theologia Moralis*, Vol. 1, n. 377; Arregui, n. 241; Aertnys-Damen, Vol. 1, n. 583; Prummer, Vol. 2, n. 146; Lehmkuhl, Vol. 1, n. 1011; Piscetta-Gennaro, Vol. 2, nn. 223, 224; Vermeersch, Vol. 2, n. 628.

¹²⁷ *Compendium Theologiae Moralis*, ed. 1921, Vol. 1, n. 501.

¹²⁸ The reference is to the reply of the Holy Office of May 5, 1902.

those cases in which the excision is equivalent to a direct abortion.¹²⁹

4. The analogy with the case of a diseased uterus is not quite perfect.

Father Henry Davis, of Oxford, has done a service to ethical science by the keen discussion of the problem of ectopic gestation which he inaugurated some years ago in the *Ecclesiastical Review*.¹³⁰ Although he explicitly refrained from a final judgment, he seemed to incline strongly to the opinion that in certain cases the excision of a pregnant tube, even before the viability of the fetus, is licit.

With this conclusion we shall definitely agree in our solution. It should be pointed out, however, that the solution does not rest on a perfect parity of the case with that of a diseased uterus. Father Davis does not argue from mere analogy. Yet many have so understood his argument; and the reason is, perhaps, the form in which the questions which paved the way for the discussion were put.

A questionnaire was sent to a number of well-qualified physicians and surgeons, which began with the following questions:

1. Catholic ethics permit the removal of a uterus, even during pregnancy, when there is a tumor threatening the life of the mother.
2. In tubal pregnancy, can it be said that there is a pathological condition which threatens the life of the mother as the uterine tumor does?¹³¹

The suggested parity between the two cases was an invitation to the medical men to express their opinion on the fitness of the analogy. This they were no doubt qualified to do from a strictly

¹²⁹ Lehmkuhl, *Theologia Moralis*, Vol. I, n. 1011.

¹³⁰ September and October, 1927. Doctor Finney replied in the issue of January, 1928.

¹³¹ *Ecclesiastical Review*, September, 1927, p. 280.

medical standpoint; but it should be remembered that they could not be expected to point out fine ethical distinctions. Anyway, there has resulted some confusion of the issue. It has been made to appear that the opinion allowing the excision of the pregnant tube in case of grave necessity rests entirely on a supposed perfect analogy between that case and the case of a diseased pregnant uterus. And it is objected that the parity is not perfect.

We are inclined to admit that the parity is not perfect. There is this difference between the two cases, that in the case of the uterine tumor, the diseased condition of the organ containing the fetus is *not caused by the pregnancy*, whereas the pathological condition of the tube in ectopic gestation is *directly caused by the pregnancy itself*. It is true that various more or less pathological conditions of the tube *may* antedate the pregnancy, and *may* be among the causes that induce the fertilized ovum to lodge in the tube; but as we shall show later (cf. Chapter V, *Causes*), it is very hard to be certain that such a condition exists in any individual case. And even if it did, it could in no way be compared to a uterine tumor. The uterine tumor constitutes *in itself* a deadly peril to the mother, entirely apart from the question whether there is any pregnancy or not, whereas the *antecedent* disorders of the tube which may be present in a case of ectopic gestation are not necessarily dangerous in themselves. The "pathological condition" which directly causes the trouble is a condition caused in the tube by the presence there of a developing fetus. Nothing whatever is to be gained by ignoring or confusing the issue on this point. For this reason it seems better not to press the analogy between the excision of a pregnant uterus and that of a pregnant tube, but to solve the latter question independently, upon fundamental principles as applied to the physiological facts. We have already examined the principles. Let us now look at the facts.

PART III
THE FACTS

CHAPTER V

PHYSIOLOGY OF ECTOPIC GESTATION

AMORAL theologian undertaking to discuss in detail matters that are purely medical or physiological may be suspected of wandering beyond the limits of his special field of knowledge. The charge is perfectly true. But in answer let it be said at once that without clear notions of the essential physiological facts it is impossible to discuss intelligently the moral question with which we are attempting to deal. Some physiological study of ectopics is therefore imperative.

The moralist does not pose as a medical authority; he simply examines and reports the testimony of specialists, just as he would have to do to get essential facts which belong to any other science alien to his own. In the present instance the volume of medical literature on the subject of ectopic gestation has been found to be very extensive, and the author does not pretend to have exhausted it. From the study of this literature, however, there emerge some facts regarding ectopic gestation which are practically certain as being universally admitted by the medical profession, and a number of others which may be disputed. An attempt will be made to distinguish the data of one class from those of the other, to cite authorities as far as practicable, and to remember always that the decision upon medical facts as distinguished from ethical questions, belongs to medical men.

It is scarcely necessary to warn the attentive reader that the medical opinions cited in this chapter should not be allowed to prejudice the decision of the moral question. We do not ask physicians to decide moral questions; and consequently any ethical or moral views which may incidentally occur among the citations we shall now make, are not presented as authoritative. We are, in

the present chapter, interested in the testimony of medical experts solely in as far as they throw light upon physiological facts which are strictly within their province. The discussion of the moral question is reserved to the succeeding chapter.

UTERINE PREGNANCY

Elementary though it is, it may be useful to the lay reader to begin with a general description of the internal generative organs of the female, and the process of gestation in general, before speaking of the complications that arise when gestation is ectopic.

The uterus, in which gestation usually takes place, is a pear-shaped organ lying in the pelvis, and having very thick walls which, when the organ is empty, lie collapsed against each other, leaving little or no space on the inside, but which are capable of very great expansion and contraction. The uterus consists of three layers of tissue: an outer serous layer which is connected with the peritoneum by the broad ligament; a middle layer of unstriped muscle tissue, quite thick and powerful; and an inner epithelial or mucous layer, which is lined with ciliated epithelium and contains glands. The lower and narrower part of the uterus is the neck or cervix, the larger upper part being the body or *corpus uteri*.

The cervix opens below into the vaginal cavity, into which its lips protrude slightly. Above, from either corner of the corpus uteri, extend the two fallopian tubes. These, leading out from the uterus on either side by a very small opening, extend for four or four and a half inches, gradually growing slightly larger until near the end they curve downward and terminate in a number of fringes or fimbriæ, one of which is attached to one end of the ovary of that side. The lumen or aperture of the tube opens into the peritoneal cavity very near the ovary.

The ovary is described as resembling in shape and size a large almond. It is connected with the uterus by a ligament running from one end of the ovary to the corner of the uterus near the base of the fallopian tube. The other end of the ovary is joined to the open end

of the fallopian tube by one of the fringes, as described in the last paragraph. The ovary has embedded in the fibrous tissue of its walls, groups of cells which are called the Graafian follicles. In these pockets the ovum is formed, and it is then periodically released into the peritoneal cavity near the opening of the fallopian tube, leaving behind it upon the ovary a characteristic structure which is called the *corpus luteum*.

As the male sperm cells, or spermatozoa, are endowed with automotion, after entering the uterus from the vagina, they can make their way to either of the fallopian tubes and out through the fimbriated end, or *ostium abdominale*, of the tube into the peritoneal cavity.

Remembering this course or path which lies open to the sperm cell in its migration, let us now turn our attention to the ovum. The ovum, meanwhile, released from the ovary in close proximity to the opening of the tube, is drawn into it, and travels along the identical route outlined above, in the direction opposite to that taken by the spermatozoon—that is, down the tube into the uterus and out through the vagina. In the tube it is propelled by the vibratory motion of the cilia with which the inner epithelial tissue of the tube is lined, and probably also by a mild peristaltic action of the tube walls.

Fertilization takes place when, somewhere along this route, a sperm cell, coming into contact with a ripe ovum, enters it, and initiates that wonderful process of multiplication and differentiation of living cells which is the development of the embryo.

In normal or uterine pregnancy, therefore, the ovum, after having been released by the ovary and fertilized by the spermatozoon somewhere between the ovary and the uterus, has been conducted into the tube and through it into the uterus. There it attaches itself to some point of the inner membrane of the uterine wall. The ovum sinks, as it were, into the wall of the uterus; and the latter gradually, by the multiplication of its own cells, throws a

covering over the fetus. The tissues both of the uterus and of the fetus now undergo a progressive modification. The uterine membrane upon which the ovule rests (*caduca* or *decidua serotina*), gradually builds up the maternal part of the placenta—a roundish, plate-like, spongy structure, whose function is to furnish a blood supply to the fetus. The uterine membrane which covers the fetus (*caduca* or *decidua reflexa*), remains normally until maturity as the outermost of three fetal envelopes. The middle envelope (the *chorion*) and the inner one (the *amnios*) are developed by the fetus itself; and it is from the *chorion* or middle envelope that the fetal part of the placenta is produced.

The *chorion* comes into contact with the walls of the uterus, and it is from the *chorion* and its villi that the fetal part of the placenta is developed. The maternal portion of the placenta is formed from the *decidua* and is external to the placenta derived from the fetus. The placenta thus consists of three layers; the innermost, entirely fetal; the outermost, entirely maternal; an intermediate layer comprising a complex arrangement of fetal villi and maternal sinuses.¹³²

Now, the one fact which for the purposes of our present study deserves special emphasis is that in normal pregnancy the fertilized ovum invades the mucous of the uterine wall to a certain extent, but *not to a dangerous extent*. The implantation of the fetus upon the uterine wall is a perfectly normal step in the progress of gestation. It is simply one link in that purposeful chain of processes by which nature secures the fertilized ovum in the place which is designed to harbor it until maturity. This implantation, when it occurs in the uterus according to the normal process of nature, does not dangerously threaten the integrity of that organ nor put the mother's life in jeopardy.

¹³² This paragraph describing the placenta is borrowed from Father Davis in the *Ecclesiastical Review* for September, 1927.

Like almost every other physiological process, this one is partly known and partly mysterious. It would doubtless be difficult even for a specialist to explain adequately all the factors which enter into the carefully balanced process by which nature first favors the penetration of the uterine wall by the ovule, up to a certain point, and then protects the uterus from further invasion. Some of these factors, however, are now known, and they constitute a most important group of facts for our present inquiry.¹³³ We sum up the reasons for both the hospitality and the immunity of the uterus by saying that nature itself has designed this organ to be the normal seat of pregnancy, and has so provided that it may normally perform that function safely. The fact itself is beyond doubt. Its importance will be apparent when we shall later have to speak of the corresponding process of implantation when pregnancy occurs in the fallopian tube.

EXTRA-UTERINE PREGNANCY

Any implantation of a fertilized ovum which takes place outside the uterus is called ectopic, which means outside of its normal place. A case of ectopic pregnancy is said to have been observed as early as 1534, and to have been treated surgically by means of cesarean section; but the instance was regarded as a mere accident not likely to be repeated.¹³⁴ Not until the last century did ectopics begin to receive the systematic attention of the medical profession, Doctors Pinard and Velpeau, of Paris, and Tait, of Birmingham, being among the leaders. The problem was called "new" in 1893, when its ethical aspects were discussed in the *Ecclesiastical Review*.¹³⁵

¹³³ Further studies on this subject are given under the heading "Development" in the latter part of this chapter, which is devoted to extra-uterine pregnancy.

¹³⁴ De Lee attributes the first mention of ectopic gestation to Abulcasis in the tenth century. He also finds several references to it by Riolan in 1626. *Principles and Practice of Obstetrics*, p. 415.

¹³⁵ *Ecclesiastical Review*, Vol. 9, p. 37.

CAUSES

Since the spermatozoon is endowed with motion and may freely migrate from the vagina through the uterus and tube even to the ovary, it would seem to be theoretically possible for it to encounter and fertilize a mature ovule at any point between the uterus and the ovary. Authorities agree that fertilization normally takes place before the ovum reaches the uterus, probably while it is in the fallopian tube, perhaps earlier still. It will be evident that any condition which retards the progress of the ovule after its fertilization in its normal course toward the uterus, and particularly any condition which causes it to adhere in the tube, may help to determine ectopic pregnancy.

Among such conditions are the following. First, the normal means by which the fertilized ovule is conveyed through the tube into the uterus—that is, the vibration of the cilia in the tube and the peristaltic action of the tube—may for various reasons be wanting or defective. Salpingitis or even slighter infections of the mucous of the tube may destroy or paralyze the cilia; various causes may induce malnutrition of the muscular tissues of the tube and so impair its peristaltic action. Secondly, the tube may be partially obstructed, so that, while it allows the transit of the agile spermatozoon, it affords no passage to the ovule, which is much larger, and which is not endowed, as the sperm cell is, with automotion. Such a partial obstruction of the tube may be caused by a small tumor in the tube itself, by pressure exerted on the tube by a tumor which has its seat in an adjacent organ, by adhesions, and so on. Thirdly, there is what is called "external migration" of the fertilized ovum. The theory is that an ovule, released, let us say, by the ovary on the left side, does not enter the fallopian tube of that side, for the reason that that tube, being partly obstructed, or diseased, or simply undeveloped or abnormal, has no ciliary vibrations. The ovule then drifts about in the liquid of the pelvic cavity for some time until it approaches the ampulla of the opposite tube, in this instance that of the right side, which, functioning

normally, draws it in. The ovum now finds itself in a healthy tube, with a clear path to the uterus. Yet it will never reach its destination. Why? Because it has been fertilized and has begun to develop in the course of its migration. Not only does its increased bulk now impede its passage, but it may besides have progressed so far in its development that it has formed a layer of differentiated cells endowed with the power of reacting upon the mucous. Normally the embryo should have attained this stage of evolution only in the uterus itself, because this erosive action of its cells is one of nature's contrivances to effect the implantation of the fetus in the uterus. Instead, the implantation has now taken place in the fallopian tube, and the progressive development of ectopic gestation begins.¹³⁶

The summary we have given, from Italian sources, of the causes that may contribute to determine ectopic pregnancy, is fairly representative of medical opinion on the subject. The theory of the external migration of the ovum was first advocated by Kussmane, and is now generally accepted as one of the probable causes. It is mentioned by De Lee,¹³⁷ Williams,¹³⁸ Graves,¹³⁹ and by Ladinski,¹⁴⁰ Douglas,¹⁴¹ and McGillvray.¹⁴² Gonorrhea as a cause is emphasized by Grove,¹⁴³ and is commonly mentioned as a possible cause.¹⁴⁴

¹³⁶ Pestalozza et al., *Trattato di Ostetricia*, p. 585.

¹³⁷ *Op. cit.*, pp. 415 *et seq.*

¹³⁸ *Obstetrics*, p. 625.

¹³⁹ *Gynecology*, p. 539.

¹⁴⁰ *American Journal of Obstetrics*, Vol. 57, No. 1, 1908.

¹⁴¹ *Medical Journal and Record*, November 19, 1924.

¹⁴² *Northwest Medicine*, Vol. 24, 1925, pp. 191-94.

¹⁴³ *Surgery, Gynecology, and Obstetrics*, 1926, pp. 102-05.

¹⁴⁴ De Lee, *Principles and Practice of Obstetrics*, p. 415, enumerates the probable causes as follows: (1) salpingitis; (2) pelvic adhesions; (3) infantile tubes with lack of cilia; (4) external wandering of the ovum; (5) diverticula and accessory tubes; (6) decidual reaction of the tube; (7) disease of the corpus luteum, increased invasiveness of the ovum favoring early nidation; (8) spasm of the tube and antiperistalsis.

It must be remembered, however, that each of these causes is more or less conjectural in any individual case. All authors agree that the exact cause in a particular case is very hard to determine, and that often no abnormality in the tube, anterior to the pregnancy, can be discovered. Apparently it can occur in a tube which was theretofore a normal one.

As regards the cause, therefore, two observations must be made. In the first place, it is not absolutely certain that the *cause* is in every case pathological. Secondly, even where it is so, it is frequently a condition which *in itself* would be no serious threat to the mother's life: a slight infection of the tube, a want of vigor in peristalsis, a small non-malignant tumor, an adhesion. It is necessary to remember that such conditions, though they may be called pathological, are often not mortally dangerous, except precisely in so far as they contribute to determine the abnormal seat of the pregnancy.

CLASSIFICATION AND FREQUENCY

Upon the classification of ectopic pregnancy, authors vary considerably in details; yet there is a general agreement in substance. Because of its much greater frequency in the tube than in any other place, some eminent Italian authorities do not hesitate to state, "Practically extra-uterine pregnancy means tubal pregnancy."¹⁴⁵ They distinguish various types according to the various parts of the tube in which the ovum may become fixed. Hence they call tubal pregnancy "interstitial" when the ovum has implanted itself in the tube at its junction with the uterus, "isthmic" when it develops in the straight portion of the body of the tube, "ampullar" if in the curvilinear end of the tube where it broadens into the funnel-shaped "ampulla," and finally "fimbrial" if it is beyond the ampulla on the fringe or "fimbria" which extends from the edge of the ampulla to connect with the ovary.

¹⁴⁵ Pestalozza et al., *Trattato di Ostetricia*, Vol. 2, p. 585.

Of a pregnancy occurring in the ovary itself the same authors say: "Ovarian pregnancy is extremely rare. Its possibility, however, is documented by observations which are above reproach." They add, however, that both in its symptoms and in its treatment this form is almost identical with tubal pregnancy. The same may be said of the "tubo-ovarian" form, that, namely, which may develop in a part of the fallopian tube which is in communication with a cystic cavity of the ovary. Tait denied the possibility of pregnancy in the ovary. Among the 252 cases of ectopics for which Pestalozza operated before 1923, not a single case of ovarian pregnancy is reported. One only was of the fimbrial type; six, interstitial. All the rest, the vast majority of the total number, were in the body of the tube, that is, in the authors' terminology, either isthmic or ampullar.¹⁴⁶

Not without importance is the judgment of these authors regarding "abdominal" pregnancy. "As to abdominal pregnancy," they observe, "if by this is meant the progressive development of a fertilized ovum in the peritoneal cavity, it must be said that up to the present time there are no sufficient proofs of its possibility." This, however, applies only to primary abdominal pregnancy, that is, where from the beginning the development is supposed to take place in the abdominal cavity. A tubal pregnancy may, after the rupture of the tube, and possibly also after what is called tubal abortion,¹⁴⁷ that is, after the escape of the fetus from the tube without rupture, pass into the abdominal cavity and there develop as what is called a secondary abdominal pregnancy. The authors record one very interesting case in which this occurred. The pregnancy went to term in the abdomen, and delivery of a living

¹⁴⁶ *Op. cit.*, Vol. 2, p. 585.

¹⁴⁷ This point is very much disputed, but there seems to be some evidence, certainly some professional opinion, in its favor.

child was made by cesarean section. The child, a girl, was still alive in 1923, at that time nineteen years of age.¹⁴⁸

Although references to abdominal pregnancy are frequent in the literature, it will be found that the cases reported are almost always secondary. Thus Harrar reports ten cases of secondary abdominal pregnancy which occurred in the New York Lying-in Hospital out of 156,000 confinements.¹⁴⁹ Some authorities insist that primary abdominal pregnancy is possible. P. Jacquin, of Strassburg, in 1922 reviewed the literature up to that time, admitted as genuine the cases theretofore reported by Richter, Czyzewick, Kohler, and Walker, and added two more of his own, and one by Schickele.¹⁵⁰ Maxwell, Eastman, and Smetana, report a case which they believe to be a primary one, where the ovum was attached to the outside of a fallopian tube, with no evidence of a rupture through the tube wall.¹⁵¹ In 1928, E. R. Ferguson reported an additional case, which he believed to be a primary one, in which the fetus was carried ten months beyond term.¹⁵²

"Primary ovarian pregnancy," says Ladinski, "is one of the rarest conditions in gynecology; Williams, in a thorough search of the literature for the past 100 years, has been able to collect only five cases of positive ovarian pregnancy."¹⁵³

As to interstitial pregnancy, the rarest form after ovarian, Wynne estimated the percentage as 1.5 per cent of all ectopic

¹⁴⁸ Pestalozza et al., *Treatato di Ostetricia*, p. 591. The chances of such survival are discussed later in this chapter, under the heading, "Chances of Survival of the Fetus," p. 140.

¹⁴⁹ J. A. Harrar, "Abdominal Twin Pregnancy," in *American Journal of Obstetrics and Gynecology*, Vol. 13, 1927, pp. 752-55.

¹⁵⁰ "La Grossesse Abdominale Primitive," in *Gynécologie et Obstétrique*, 1922, pp. 492-512.

¹⁵¹ "Primary Abdominal Pregnancy," in *Surgery, Gynecology, and Obstetrics*, Vol. 45, 1927, pp. 802-04.

¹⁵² *Journal of the American Medical Association*, 1928.

¹⁵³ Ladinski, "Extra-uterine Pregnancy: Study of 110 Cases," in *American Journal of Obstetrics*, Vol. 57, 1908, n. 1.

forms.¹⁵⁴ Rosenthal's estimate is 3 per cent.¹⁵⁵ Ladinski reports estimates varying from less than one to three per cent.¹⁵⁶

Bearing in mind the difference of medical opinion upon some details and the essential difference in history between primary and secondary forms, the following diagrammatic classification may perhaps be taken as fairly complete and correct.

Primary Forms	Secondary Forms
Interstitial	Intra-uterine
	Abdominal
	Intraligamentary
Tubal	Abortion
	Tubo-abdominal
	Tubo-ovarian
	Abdominal
	Intraligamentary
Ovarian	Abdominal ¹⁵⁷

From this diagram it will be seen that secondary abdominal pregnancy can result from any of the three primary forms. Intra-uterine pregnancy, which is classed here as a secondary form of ectopics, is rather one of the possible outcomes of a pregnancy which began as an interstitial one. Intraligamentary is a secondary

¹⁵⁴ "Interstitial Pregnancy," in *Bulletin of Johns Hopkins Hospital*, Vol. 29, 1918, p. 29.

¹⁵⁵ Cf. Nelson, "Unruptured Interstitial Pregnancy," in *American Journal of Surgery*, Vol. 3, 1927, pp. 271-74.

¹⁵⁶ *American Journal of Obstetrics*, Vol. 57, 1908, and *Journal of the American Medical Association*, Vol. 59, 1912, p. 854.

¹⁵⁷ Cf. Douglas, in *Medical Journal and Record*, November 19, 1924.

form where the fetus has broken out through the tube walls into the folds of the broad ligament.

Practically, this classification does not complicate matters very much when we remember the general similarity of the treatment recommended for all forms—it is always operative—and the very great relative infrequency of all the other primary forms as compared with the tubal. In a broad and general sense, Pestalozza's statement that "extra-uterine pregnancy is practically synonymous with tubal," remains true.

As to the frequency of ectopic gestation in general as compared with normal pregnancy, it is very hard to form a reliable estimate. Complete statistics do not exist. The Johns Hopkins Hospital Bulletin reported 303 cases in 22,688 gynecological cases, or 1.3 per cent; the Woman's Hospital in New York reported 309 in 19,694, or 1.5 per cent; the Charity Hospital and Baptist Hospital, New Orleans, show 1 in 78.9, or 1.02 per cent.¹⁵⁸

That the absolute number of cases is far from negligible is apparent from the literature. Cases are reported and analyzed by the hundreds and even by the thousands.¹⁵⁹ McDonald speaks of studies in which more than six thousand cases, taken in series, were analyzed.¹⁶⁰

¹⁵⁸ Sellers and Saunders, in *Southern Medical Journal*, Vol. 31, 1928, p. 283.

¹⁵⁹ In Italy before 1923 Pestalozza had operated for this cause 252 times and Mangiagalli 148 times. Two Italian surgeons thus had a record of 400 operations. Ladinski in 1908 analyzed 110 cases (*American Journal of Obstetrics*, Vol. 57, n. 1); Farrar in 1918 studied 309 cases which occurred in one hospital in ten years (*American Journal of Obstetrics*, June, 1919). We have consulted other special studies of 211 cases (T. B. Sellers in *Southern Medical Journal*, Vol. 21, 1928, p. 283); 117 cases (Foskett in *American Journal of Obstetrics and Diseases of Women and Children*, Vol. 74, 1916, n. 2); 183 cases (Lewis in *Illinois Medical Journal*, Vol. 37, 1920, p. 301); 253 cases (Lukes in *Journal of Obstetrics and Gynecology of the British Empire*, Vol. 28, 1921, p. 263); 400 cases (Mason, in *Boston Medical and Surgical Journal*, Vol. 189, 1923, p. 914).

¹⁶⁰ "The Process of Tubal Pregnancy," in *American Journal of Obstetrics and Gynecology*, July, 1923.

DIAGNOSIS

In the replies of American specialists to the questionnaire prepared by the editors of the *Ecclesiastical Review* in 1893,¹⁶¹ the consensus of opinion was that an ectopic pregnancy, before the crisis is reached, is extremely difficult to recognize. This remains true after nearly forty years of observation. Dr. Pestalozza and his colleagues state: "It is very difficult to diagnose extra-uterine pregnancy before the beginning of the crisis in which it usually terminates."¹⁶² They even observe that "it is a mere accident if an ectopic gestation comes to be discovered in the course of its progressive development, at least during the earlier months."¹⁶³

This does not mean that no progress has been made. It is said that "nothing in the surgical field has made such brilliant progress as the diagnosis and treatment of ectopic pregnancy."¹⁶⁴ Yet it is generally admitted that the diagnosis is still "very difficult."¹⁶⁵ A few would perhaps dissent from this view. One doctor states: "It is possible in nearly every instance for both the family physician and the surgeon to recognize unruptured tubal pregnancy; and in the large majority of instances it is inexcusable not to so recognize it . . . With the details of a number of such cases before me, I am convinced that it is possible to recognize tubal pregnancy in its early stages, even as early as the fourth or fifth week, and before rupture of the tube."¹⁶⁶

Another puts it somewhat less strongly: "It is my firm belief, and this opinion is shared by others, that the signs and symptoms of tubal pregnancy are sufficiently distinct and are grouped so characteristically that the diagnosis of tubal pregnancy can be made with a degree of certainty fully as great as in other diseases of the

¹⁶¹ Vol. 10, p. 28-35.

¹⁶² *Op. cit.*, Vol. 2, p. 596.

¹⁶³ *Ibid.*, p. 592.

¹⁶⁴ J. L. Bubis, in *American Journal of Obstetrics and Gynecology*, January, 1929.

¹⁶⁵ *Ibid.*

¹⁶⁶ Dr. Wirt G. Wilcox, in *Medical Gazette*, April, 1922.

pelvic organs. The presence of all the characteristic signs and symptoms will render the diagnosis almost absolute; at times, even if only one or two can be elicited, in the absence of signs pointing to other pelvic lesions, a presumptive diagnosis can be made.¹⁶⁷

All agree that the disorder is not characterized by "pathognomonic" symptoms, and the weight of opinion is certainly to the effect that even the differential diagnosis, before rupture of the tube, is difficult.¹⁶⁸ For the differential diagnosis, the symptoms most commonly enumerated are missed menstruation, pain in lower abdomen, vaginal bleeding, sensitiveness on one side of the uterus.¹⁶⁹ Other symptoms less commonly regarded as characteristic are a bluish discoloration of the skin about the umbilicus, called "Cullen's sign," and acute shoulder pains. These last occur, if at all, at the acute stage, during tubal abortion or rupture.¹⁷⁰

DIAGNOSIS OF ADVANCED CASES

Several authorities state that even advanced cases of ectopic gestation are often hard to recognize, at least with certainty.¹⁷¹ For cases where the fetus has escaped from the tube and continues to develop to near maturity as a secondary abdominal pregnancy, two French authorities claim that the diagnosis can be made certain by radiography. When it has been ascertained that a pregnancy exists, lipiodol is injected into the uterus, enabling the observer to satisfy

¹⁶⁷ Louis J. Ladinski, in *Journal of the American Medical Association*, Vol. 59, 1912, p. 854.

¹⁶⁸ Cf. De Lee, *Principles and Practice of Obstetrics*, p. 424; Mann, "Ectopic Pregnancy," in *Medical Journal and Record*, October, 1928.

¹⁶⁹ Cf. De Lee, *op. cit.*, p. 424; Halsted, in *Medical Journal and Record*, June 6, 1928; Sabel, in *Medical Journal and Record*, May 1, 1929; Dannreuther, in *Journal of the American Medical Association*, Vol. 88, 1927, pp. 1302-05.

¹⁷⁰ A special study of the leucocyte count as an aid to diagnosis in ectopic gestation, by L. K. P. Farrar, appeared in *Surgery, Gynecology, and Obstetrics*, 1925, pp. 655-63.

¹⁷¹ Mann, "Ectopic Pregnancy," in *Medical Journal and Record*, October 17, 1928; Halsted, in *Medical Journal and Record*, June 6, 1928.

himself that the fetal skeleton revealed by the radiograph is distinct from the uterus.¹⁷² This use of the roentgen ray first to reveal the shadow of the fetal skeleton, thus proving the nature of the abdominal mass, and then to visualize the uterine cavity with contrast fluid, thus proving that the fetus is extra-uterine, has also been resorted to for diagnosis in cases reported by Viallet and Jahier,¹⁷³ Schockaert,¹⁷⁴ Jaroschka,¹⁷⁵ Chamba,¹⁷⁶ and Candy.¹⁷⁷

In all these cases it is of course of supreme importance to determine whether the child be still alive. Fetal movements and the beating of the fetal heart are still the only certain signs by which this fact can be determined.¹⁷⁸ *We must observe in passing that as long as there is a positive probability of the presence of a living child, no procedure can be regarded as licit, even for purposes of diagnosis, if it is of such a nature that it will directly kill the child in case he is present.*

¹⁷² Jeanneney and Villar: "La Grossesse Abdominale et Son Traitement Chirurgical," in *Gynécologie et Obstétrique* Vol. 17, 1928, n. 3.

¹⁷³ "Radiographie d'une Grossesse Tubaire après Injection Intra-utérine de Lipiodol," in *Journal de Radiologie et d'Électrologie*, Vol. 11, 1927, p. 416.

¹⁷⁴ "Grossesse Abdominale à Termé avec Enfant Mort," in *Bulletin Social d'Obstétrique et de Gynécologie*, Vol. 17, 1928, p. 196.

¹⁷⁵ "Die Metrosalpingographie als Diagnostisches Hilfsmittel," in *Zentralblatt für Gynäkologie*, Vol. 51, 1927, pp. 1097-1107.

¹⁷⁶ "Radiographie d'une Grossesse Extra-utérine," in *Bulletin et Mémoires Sociales de Radiologie Médicale de France*, Vol. 14, 1926, p. 158.

¹⁷⁷ "Skigrams of a Case of Full-time Ovarian Pregnancy," in *British Journal of Radiology*, Vol. 32, 1927, pp. 174-75. All the cases heretofore mentioned in connection with this method of diagnosis were cases of advanced pregnancy. A modification of the method, however, which is applicable to tubal pregnancy even in its early stages, is explained by Schneider and Eisler in "Die Roentgendiagnose der Eileiter Schwangerschaft," in *Zentralblatt für Gynäkologie*, Vol. 51, 1927, pp. 1360-69. Rucker and Whitehead comment favorably on the method in "Hysterosalpingography and the Diagnosis of Ectopic Pregnancy," in the *American Journal of Roentgenology and Radium Therapy*, Vol. 20, pp. 431-33.

¹⁷⁸ Jeanneney and Villar, loc. cit.

DEVELOPMENT

In tubal pregnancy the implantation of the ovule proceeds in the same way as in uterine pregnancy, that is, by the gradual sinking of the ovum into the mucous membrane, as a result of the erosive action of the trophoblast. There will accordingly be an incubator-chamber entirely enclosed from the lumen of the tube; there will also be the formation of a *caduca reflexa*.¹⁷⁹ The mere comparison, however, of the mucous membrane of the tube with that of the uterus, in structure and thickness, is enough to account for the essential difference that will be observed in the formation of the *caduca*. Not only is the mucous of the tube much thinner than that of the uterus, but it is besides entirely wanting in glands; hence there will be no differentiation into layers of spongy and of compact tissue. Moreover, the formation of decidual elements is much less active in the tubal than it is in the uterine mucous. Now, the decidual formation has a well-known function, that of opposing a barrier to the further erosive action of the trophoblast. Absence or deficiency of the decidual formation therefore means less defense for the walls of the pregnant organ against the invasion of the trophoblast. It is for this reason that in tubal pregnancy the ovum, after burying itself in the mucous membrane, tends to penetrate, along with its epithelial appendages, into the underlying muscular tissue. . . . The consequences are, first the more ready erosion of the walls of the muscular covering of the tube, and then a sudden eruption of blood into the incubator chamber, which tears the ovule away from its connections, and brings the pregnancy to an end. Hemorrhage in the incubator chamber thus accounts for the frequent termination of tubal pregnancy in abortion. Moreover, the same tendency of the epithelial covering of the villi to penetrate the tissues, may go so far as to part the muscular envelope of the tube and attenuate it to such an extent as to cause the rupture of the pregnant tube.¹⁸⁰

¹⁷⁹ The last statement is somewhat modified in the more detailed accounts of this development given by other specialists. See p. 112 *et seq.*

¹⁸⁰ Pestalozza et al., *Trattato di Ostetricia*, Vol. 2, pp. 587 *et seq.*

Abortion and rupture of the pregnant tube are therefore the most frequent terminations of extrauterine pregnancy; and these usually interrupt its development about the second or third month. They are not, however, the only terminations which are possible. In some exceptional cases the development continues, although it has to overcome the resistance presented by the tubal walls to the necessary expansion—a resistance which is all the greater because of the deficiency in the muscle tissue of the tube, of that hypertrophy which should be an accompaniment of pregnancy. Hence it may happen that a tube which has held out against the early invasion of the trophoblast may later give way to the increasing outward pressure, or may by its contractions tend to detach the embryo and produce abortion.¹⁸¹ Sometimes the only result is the rupture of the amniotic sac, and then the fetus may continue to develop, abnormally, without that membrane. We have even seen one case where, after the rupture of the sac, the fetus passed out of the tube at the abdominal end into the abdominal cavity, remaining attached to the placenta by means of the umbilical cord, and so continued to live and to develop. This continuance of fetal life may occur, and we have seen it go to term, even where the rupture of the tube walls was considerable, the fetus passing into the abdominal cavity as a secondary abdominal pregnancy. Still more rarely the tube walls may accommodate themselves to the gradual distention, so that the pregnancy may go to term in the tube itself without rupture, in which case the fetus usually dies soon after maturity. The outcomes of tubal pregnancy are therefore, in the order of their frequency: (1) tubal abortion; (2) rupture of the pregnant tube; (3) transit to secondary abdominal pregnancy; (4) uninterrupted development to term in the tube.¹⁸²

These authors give no exact figures to represent the relative frequency of these four possible outcomes. Since, however, out of

¹⁸¹ Other authorities, as will be seen, attribute abortion rather to the longitudinal splitting of the tube walls by hemorrhage, than to the contractions of the tube muscles. See p. 119.

¹⁸² *Ibid.*

at least several hundred cases, they mention only one which went to term as a secondary abdominal pregnancy, and since they say that the uninterrupted development of the fetus to maturity in the tube itself is "still more rare," there is nothing in their testimony to contradict that adduced by Father Davis, presumably from English sources,¹⁸³ to the effect that 78 per cent of all ectopic gestations result in tubal abortion, and 22 per cent in rupture. The percentage of viable ectopic fetuses is certainly fractional, although their absolute number now undoubtedly far exceeds the 152 reported by Sittner in 1903.¹⁸⁴

The hemorrhage which accompanies tubal abortion is described as follows by Pestalozza :

The abortion is necessarily accompanied by hemorrhage, and this may be impossible to stanch, even where the ovum is in the earliest stages of its growth and of diminutive size. The blood comes from the incubator chamber into which flow an immense number of minute blood-vessels. Ovules of microscopic dimensions may, in parting from their connections with the tube, give rise to hemorrhages which become mortal within a short time. The blood at first accumulates in the tube and then passes out into the peritoneal cavity, where it may either gather into an encysted mass, or diffuse itself throughout the cavity. In the first instance you have the formation of a haematocele, in the latter, the inundation of the peritoneal cavity.¹⁸⁵

Very similar are the results of tubal rupture :

The extent of the rupture may be very small. It may be a mere point, scarcely discernible, and yet it gives rise to a copious flow of blood. The flow is not always connected with the erosion or rupture of any conspicuous blood vessel. To explain the quantity of blood which pours out in a given time we must remember that

¹⁸³ *Ecclesiastical Review*, September, 1927, p. 278.

¹⁸⁴ Further studies on this subject will be pursued later in this chapter, under the heading "Chances of Survival of the Fetus," p. 140.

¹⁸⁵ *Op. cit.*, Vol. 2, pp. 589, 590.

when rupture of the tube occurs, the peritoneal cavity is put in direct communication with the incubator chamber which is fed by countless minute arteries. At other times the breach may be wide, so as to allow the escape of the entire ovum, or of the fetus alone in case the sac also is ruptured.¹⁸⁶

Two additional facts here mentioned by the same authors deserve attention. First, rupture of the tube is not caused exclusively by the mere physical distention of the tube as a result of the increasing bulk of the embryo, but rather by the progressive weakening of the walls of the tube under the erosive invasion of the embryo. Secondly, as a consequence, even the death of the embryo in the tube does not necessarily terminate the danger with which tubal pregnancy threatens the life of the mother. For, though in that case the pressure at least ceases to increase, yet the walls of the tube may remain for some time so seriously affected by the antecedent erosion that a slight shock may bring on rupture and fatal hemorrhage.

We touch here upon a point which will be of cardinal importance in the moral argument which constitutes Part IV of this thesis; namely, the question of fact whether the tube in which an ectopic pregnancy has its seat, is pathological even before what is commonly called "rupture" of the tube.

With a view to answering that question, we shall examine the testimony of two experts who will give us somewhat more in detail the course of development of a tubal pregnancy. It will be sufficient here to adduce the testimony. We will comment upon it in the argument.

The first witness is Dr. Jennings C. Litzenberg, Head of the Department of Obstetrics and Gynecology in the Medical School of the University of Minnesota.¹⁸⁷

¹⁸⁶ *Ibid.*

¹⁸⁷ The quotations which follow are from his article, "Microscopic Studies of Tubal Pregnancy," in the *American Journal of Obstetrics and Gynecology*, Vol. 1, No. 3,

Inasmuch as the uterus and the tubes are genetically identical, and therefore composed of the same tissues, we might well expect the same reaction of the uterine and tubal elements to a pregnancy. Careful observations demonstrate that the physiological scheme is followed exactly in both uterus and tube; in the latter, however, the results are pathological from the beginning because the ovum is implanted in an organ entirely unfitted anatomically for its reception or development. We find in tubal pregnancy the analogues of everything occurring in intra-uterine gestation, but never the identical thing itself because of anatomic and histological differences of the two organs. That is the processes are the same, but the results inevitably different.

Implantation occurs in exactly the same manner in both uterus and tubes; the ovum burrows into the mucous membrane in each instance, but from the moment of entrance it meets different conditions, and its further history is determined by them.

In the uterus, the fertilized ovum finds a mucous membrane whose stroma, either because of the greater thickness or because of specialization, is capable of developing into decidua thick enough to harbor the ovum, protect the muscle of the uterus from the erosive action of the trophoblast, and extensive and loose enough to form the decidua capsularis.

In the tube, on the other hand, there is a scant connective tissue stroma (or specialization of the tube is lacking) and we find no true decidua, although 'decidual reaction' can be demonstrated.

In the uterus, the decidua, because of its important function, might well be called an organ; in the tube, we find no such organ, but decidual cells are discernible throughout the mucous membrane of the tube, either as isolated cells or in groups, but never as true decidua.

Inasmuch as there is no decidua in the basalis, or what little there might have been having been destroyed by the erosive action of the trophoblast, the ovum almost immediately after penetrating

the mucous membrane comes into contact with the inner muscular layer of the tube, continues its erosive action on the muscle in its attempt to fasten itself and seek blood supply, thus literally riddling the muscle and weakening the wall.

Figure 22^{**} shows the muscle layer in process of destruction by the trophoblast, and Figure 5 shows the villi anchored directly into the musculature of the wall and eroding it.

In the uterus, the thick decidua basalis protects the muscle wall from such attack and furthermore furnishes ample area for the excavation of the sinuses or lacunæ by the trophoblast within the decidua. The vessels in the uterine decidua basalis eroded to furnish the blood to the lacunæ, are very small, causing not a hemorrhage but a normal blood supply to the intervillous spaces, while in the tube this protecting decidua being absent, the muscle is attacked, and the vessels eroded are much larger, thus causing a hemorrhage instead of a normal blood supply into the intervillous spaces.

The blood vessels of both the uterus and the tube are dilated in the region of the implantation of the ovum, but in the uterus they are protected from the destructive action of the trophoblast by the presence of the decidua basalis, so that only the smaller vessels in the decidua itself are attacked. In the tube on the other hand on account of the absence of the decidua, the unprotected dilated vessels in the musculature are eroded, causing a hemorrhage in the intervillous spaces instead of a normal blood supply. This hemorrhage is sometimes so profuse that the villi are displaced and crushed together and the ovum capsule is distended beyond its ability to resist, and the blood bursts through into the tube lumen.

Figures 5, 6, and 16 show the dilated vessels of the pregnant fallopian tube in the region of the implantation.

** The references are to photomicrographic plates which illustrated Dr. Litzenberg's original article which we are quoting from the *American Journal of Obstetrics and Gynecology*. Some of these figures are reproduced with his permission at the end of this chapter; we have kept the original numbering for the sake of easy reference.

Figures 5, 7, and 16 show villi close to the walls of the large blood vessels; Figure 18 shows the villi in the act of penetrating the vessel walls. In Figures 8 and 18 the penetration is completed, and in Figures 14, 15, and 18 the blood flow between the vessels and the intervillous spaces is completely established.

When we note the size of the vessels in Figures 5, 6, 8, 14, 16, and 18 which may be or have been perforated by the erosive trophoblast or villi, it is very easy to understand why we see so much hemorrhage into the intervillous spaces, capsularis, and tube lumen. Figures 8 and 15 show the villi distorted and crushed together by the excessive amount of blood in the intervillous spaces, and Figure 20 shows such an amount of hemorrhage that we scarcely see anything but blood, which is so excessive that it has flattened the embryonic sac so that it looks like a tube.

Webster said that in all the pregnant tubes he had examined he had never seen a capsularis without hemorrhage. The writer believes that hemorrhage is the rule. . . .

It is usually stated that tubal gestation is terminated by 'tubal rupture' or 'tubal abortion.' This is only approximately correct. There is not strictly speaking an abortion, that is a separation of the ovum from its attachment and extrusion by the activity of the musculature of the tube. Separation does sometimes occur, and the ovum may be found free in the tube lumen, but that this is the rule in the so-called tubal abortion, or that the tube has power to expel the separated ovum is very doubtful.

If the implantation is nearer the uterine end of the tube, the termination will be either 'external rupture' of the ovum capsule through the tube wall into the abdominal cavity, or 'internal rupture' through the inner ovum capsule into the tube lumen, or, rarely, separation of the ovum, in which case it perishes and may become a tube mole or it may be pushed along toward the fimbriated end by the hemorrhage, but not by the tube muscle. True abortion is rare in the writer's opinion. 'Internal rupture' is a better term than 'tubal abortion,' for although in a great majority of so-called unruptured tubes, hemorrhage into the tube and from the *ostium abdominale* is the rule, it is not always due to separation of the ovum, as in uterine abortion. On the contrary it

is more often due to a rupture of the internal ovum capsule caused by distention of the ovum capsule by the hemorrhage explained above and by a weakening of the capsularis by the erosive action of the villi.

'External rupture' may be either a true bursting of the weakened eroded tube wall under pressure from within, due to the growth of the ovum, or distention by hemorrhage, or it may be only an erosion by villi, the wound being very small, and yet it may terminate fatally because a large vessel has been opened.

Figure 17 shows the trophoblastic mass having perforated the tube wall, and Figures 1, 2, 3, and 4 show how the tube wall has been 'riddled' and weakened by the erosive action of the villi.

It is easy to understand how such a weakened wall can rupture. In conclusion, without attempting to enumerate the specific points, it may be said that every physiological process occurring in intra-uterine pregnancy is repeated in tubal gestation, but *from the moment after the ovum has penetrated the mucous membrane of the tube every detail is pathologic.*¹⁸

The following quotation, which confirms and supplements the foregoing, is taken from a study by Dr. Ellice McDonald of the Gynecological Pathology Laboratory of the University Hospital, Philadelphia, which appeared in the *American Journal of Obstetrics and Gynecology*.²

Tubal pregnancy is commonly understood to be pregnancy within the lumen of the tube, but is really pregnancy outside of the tubal mucosal canal and between the muscular coats of the tube wall.

When the ovum is implanted in the tube, whatever may be the cause, it is deposited upon the mucous membrane, but sinks within the tissues of the tube, so as to embed itself below the mucous membrane, exactly as it does in normal pregnancy in the uterus. The ovum penetrates the surface mucosa and buries itself

¹⁸ This ends the quotation from Dr. Litzenberg. The italics in the last sentence are ours. 2 Vol. 6, No. 1, July, 1923.

between the layers of the muscle of the tube. Peters, Opitz and others have shown that this occurs in normal uterine pregnancy and that the ovum embeds itself deep within the uterine mucosa and there develops. In tubal pregnancy, a similar process occurs. The ovum embeds itself below the mucosa and between the muscular coats, and proceeds to develop there. The ovum has apparently a pseudo-malignant property of destruction of tissue, so that it passes through the tubal mucosa by active burrowing to rest below the mucosa. It is probable that this destructive action of the ovum is due to a proteolytic ferment, as the muscle in advance of the actual destruction is altered by swelling, degeneration, and breaking down of the fibres, even before the fibres are in contact with Langhan's cells, constituting the deep cellular layer of the chorionic villi. The lumen of the tube is separated from the gestation sac by a well-marked muscular and mucosal layer.

The ovum is rarely embedded in a fold of mucous membrane, but must come to lie between the folds (intracolumnar) on the base of the mucous membrane which it very promptly penetrates to reside between the muscular coats.

The embedding of the ovum below the tubal mucosa has been studied by Futh, Grusdew, Kuhne, Kreisch, Aschoff, Heinsius, Uleska, Stroganowa, Kroemer, Fellner, von Francke, Garkisch, and others. It has apparently, however, not been appreciated that the first accident in tubal pregnancy is that of extravasation of blood between the coats of the tube wall, and that the first hemorrhage is usually confined within the outer boundaries of the tube itself. The first accident is a hemorrhage at the site of the ovum, and is due to the opening of blood vessels by the destructive action of the trophoblast, and this hemorrhage further splits the muscular coats of the tube wall and dissects them apart.

A study of a number of my specimens shows that extravasation of blood within the confines of the tube and between the coats is an almost constant preliminary process in tubal pregnancy, precedes the more dangerous and extensive accident of tubal abortion, and also usually precedes that of tubal rupture. The extravasation

may be continued by repeated intramuscular hemorrhages to form a hematoma of the tube where the blood is confined within the outer boundaries of the tube and does not leak on the peritoneum.

The canal itself in early tubal pregnancy is usually compressed. The tube lumen is not a hollow viscus to be burst into, but it is closed or compressed. When the canal is perforated, it is by the destruction of the tube wall from without inwards by the corrosive action of the trophoblast. The dissection apart of the tube walls seems to be due not only to the force of the hemorrhage but also to the preliminary weakening of the line of cleavage between the muscular coats by actual trophoblastic penetration, and in advance of this, alteration of the muscle by some process, presumably proteolytic ferment, so that the muscle becomes swollen and glassy. The muscle fibres lose their boundaries and the nuclei disappear. The muscle is prepared for separation and the hemorrhage passes along the altered zone.

In advanced cases the tube wall itself is destroyed, not ruptured, so that hemorrhage may result into the peritoneal cavity through the tubal ostium. It is quite common, however, that hemorrhage of the type called tubal abortion may not be through the tubal ostium at all, but the hemorrhage may cause dissection of the tubal walls until it arrives at the fimbria, where it ruptures the junction between the muscular coat and the mucous membrane to escape in a break through the tissues on to the peritoneum. Often in these cases careful dissection will show that the remnants of the tubal lumen are outside the blood clot and that the mucosa is distorted and compressed in the walls of the hematoma. This is more frequently seen in the earlier cases, as in the advanced cases the anatomical relations are much distorted.

The hemorrhage in tubal abortion occurs quite frequently after succeeding intramural extravasations have formed a hematoma of the tube. In these cases it is quite frequently found that the hemorrhage is not directly from the ampullar opening, or ostium, of the tube, but that the dissecting hemorrhage has separated the muscular coats along the length of the tube to the junction of the muscular coats with the mucous membrane at the fimbria. Here it

quite frequently ruptures the junction of the mucosa and outer coats at the fimbria to pass out upon the peritoneum through this break and not through the tubal lumen of the mucosa of the canal. This mode of hemorrhage is much more common than is supposed, and is overlooked on account of the distortion and destruction of tissue caused by the process of tubal gestation. Tubal abortion, so called, is therefore frequently not a descriptive term for a condition that is often neither tubal nor an abortion; but it is frequently extra-canicular both in growth and termination, and is almost always a hemorrhage.

For this reason the following classification of tubal pregnancy is suggested :

1. Intramural extravasation, the usual first accident;
2. Fimbrial rupture (tubal abortion);
3. Transperitoneal rupture (tubal rupture).

It is hoped that this new terminology will be more descriptive of the pathologic processes involved in tubal pregnancy.

The usual course of tubal pregnancy is intramuscular embedding of the ovum with dissection of the muscular coats of the tube and destruction of the tissue by the invading trophoblast. The first common accident is intramural extravasation of blood which precedes the first symptoms of tubal pregnancy. There follows in two thirds of the cases, fimbrial rupture, or less commonly transperitoneal rupture in one-third of the cases. Fimbrial rupture quite often occurs through dissection of the muscular coats to their junction with the mucosa at the fimbria, and hemorrhage discharges at the end of the tube through a break in the tissue. In other cases the lumen is destroyed by the corrosion of the invading trophoblast, so that the mucosa and its boundaries are penetrated and the hemorrhage passes through the mucosal orifice at the ostium. Tubal hematoma quite frequently forms outside the tube lumen and within the muscular coats of the tube, although the canal may be destroyed by the invading trophoblast and be incorporated into the hematoma. Intramural extravasation usually causes the death of the fetus. Transperitoneal rupture may indeed occur as a first accident and not be preceded by

intramural extravasation, or else the extravasation may be very closely followed by rupture in those cases of sudden symptoms and severe hemorrhage.¹⁹⁰

A supplementary quotation from another American authority will complete our medical testimony on the development of tubal pregnancy.

When tubal pregnancy does not terminate in an abortion it almost invariably culminates in a rupture of the tube. This may occur as early as the sixth week or may be postponed until the fourth month. Rupture is usually followed by the escape of the ovum into the peritoneal cavity or by its extrusion between the layers of the broad ligament, but this may not take place until one or more ruptures have occurred. When rupture is due to over-distention and attenuation of the walls of the tube produced by the growing ovum or by hemorrhage into the tube, the rent may be small or extend the entire length of the tube. When caused by the penetrating and eroding villi, the opening may be no larger than a pin head.

One or even more ruptures of the tube may occur and cause no interruption of the pregnancy; in that case the bleeding is slight and the blood clot seals the perforation in the tube wall.

The termination of the various forms of ruptured tubal pregnancy is not by any means uniform, and their multitudinous sequelæ lend additional interest to this serious and at times very formidable disease.¹⁹¹

DANGER TO THE MOTHER

On the question of danger to the mother, one without professional experience must, I think, be cautious against generalizations. It is certain that the degree of danger varies very much in different types of cases, and at different stages of the same case. It would be obviously absurd for a moralist, even after a

¹⁹⁰ Dr. Ellice McDonald, in *American Journal of Obstetrics and Gynecology*, July, 1923.

¹⁹¹ Louis J. Ladinski, in *American Journal of Obstetrics*, Vol. 57, 1908, No. 1.

painstaking study of the medical literature, to assert either that there is *never* grave danger before actual external rupture of the tube, or that there is *always* mortal danger from the very inception of ectopic pregnancy. The question of the gravity of the danger in any individual case is a medical question. It is for the physician or surgeon to decide, and, unless we are mistaken, a prudent physician will not decide it independently of a careful weighing of the circumstances of each case individually.

To give a general idea of medical opinion on the question we shall cite a number of professional opinions. In doing so, we once more beg to remind the patient reader that these opinions are cited purely as expert testimony upon the medical facts, without prejudice to any of the moral questions which will be discussed in Chapter VI.

Pestalozza and his colleagues regard the danger as absolutely grave and unconditionally prescribe the excision of the tube as the only remedy. They do not, however, state that the death of the mother is certain to follow unless the tube is immediately excised. In fact, they state that the hemorrhage from tubal abortion or rupture may "in a fairly considerable number of cases" stop of itself. "But no positive indication exists which insures such a happy outcome; and we see dangerous and deadly hemorrhages result from a detachment of ova which have developed for only a few days."¹⁹² For this reason, whenever an ectopic is discovered, they counsel the immediate excision of the tube, and recognize no expectant treatment.

Sutton cites a case of the sudden death of a woman in a Paris cafe, which was considered to be a case of poisoning until the autopsy revealed a ruptured tubal pregnancy. Ladinski thinks this case has been duplicated many times since.

I feel quite certain that many cases of sudden death in parturient women which have been ascribed to heart failure, etc., were

¹⁹² *Op. cit.*, Vol. 2, p. 598.

really due to ruptured tubal pregnancy. While it is true that a certain percentage of cases recover spontaneously, and I would include in their number especially cases of tubal abortion, it is also true that the percentage of recoveries from operations in the hands of competent men is exceedingly large.¹⁹³

The same authority in another article reports a tragic death where a woman who was under observation in his office for tubal pregnancy suffered a rupture of the tube then and there, and died in less than two hours, just as the operation, which had been delayed to attenuate shock, was being performed. A two-months' fetus was taken from the abdomen. The author comments upon the difficulty of estimating the danger after a tubal rupture.

This case teaches that it is impossible for a practitioner or a specialist, unless he be possessed of second sight, to determine in advance from the symptoms, whether a patient (after the rupture of the tube) may recover from shock or die pending an operation. Nothing in this case led me to suspect that rupture would be followed so rapidly by a fatal issue.¹⁹⁴

Dr. Dannreuther, Professor of Gynecology in the New York Post-Graduate School and Hospital, remarks:

Except for acute appendicitis, it [ectopic gestation] supplies the operating table with more emergent and tragic cases than any other lesion of the lower abdomen.¹⁹⁵

Hawks¹⁹⁶ gives a list of twenty-nine ruptured cases in which the patient died without operation. The time between rupture and

¹⁹³ Dr. Louis J. Ladinski, in *American Journal of Obstetrics*, Vol. 57, 1908, No. 1.

¹⁹⁴ Dr. Louis J. Ladinski in *Journal of the American Medical Association*, Vol. 59, 1912, p. 854.

¹⁹⁵ "The Enigma of Ectopic Pregnancy," in *Journal of the American Medical Association*, Vol. 88, 1927, pp. 1302-05.

¹⁹⁶ 2 "On Immediate versus Delayed Operation in Cases of Collapse Following Ruptured Ectopic Pregnancy," in *Surgery, Gynecology, and Obstetrics*, February, 1923, pp. 232-34.

death varies from twenty minutes to forty-eight hours. Nine died within three hours.

In the records of the Institute of Medical Jurisprudence in Vienna for the period from 1899 to 1922, Katz found 31 cases of more or less sudden and unexplained death in which autopsy revealed interrupted ectopic pregnancy with internal hemorrhage. All of these cases were tubal pregnancies, 22 in the isthmic portion, 5 in the ampullar, and 4 in the interstitial. All of the 22 isthmic pregnancies terminated within the first or second month by rupture. Of the 5 ampullar pregnancies, 3 ended in rupture in the third or fourth month, and 2 in tubal abortion. In the interstitial pregnancies the rupture occurred once in the fourth and once in the fifth month.¹⁹⁷

Wilcox writes:

Ectopic pregnancy is a condition which, from its inception to its close, is highly dangerous to both health and life. (...) A sudden exertion, lifting a piece of furniture, running upstairs with a child in her arms, may cause a rupture of the delicate membrane, and the patient is dead before help can reach her.¹⁹⁸

Dannreuther's testimony¹⁹⁹ is almost to the same effect.

Consequently from the time the embryo begins its growth the patient is in constant jeopardy from internal hemorrhage, either from tubal abortion or from early rupture.

All authorities agree that the interstitial variety is the most dangerous.

A gestation developing in the uterine or cornual section of the fallopian tube is infinitely the most serious type of ectopic pregnancy. Rupture is the most frequent termination and is

¹⁹⁷ Katz, "Untreated Ectopic Pregnancies with Fatal Outcome," *Zentralblatt für Gynäkologie*, Vol. 47, 1923, p. 1567. Abstract by *International Abstract of Surgery*, Vol. 38, 1924, p. 51.

¹⁹⁸ *Medical Gazette*, April, 1922.

¹⁹⁹ *Ide. cit.*

attended by profuse bleeding, because large blood-vessels as a rule are involved.²⁰⁰

The isthmic variety may rupture into the broad ligament or directly into the abdominal cavity, causing severe hemorrhage and all the classical symptoms of collapse. The interstitial variety is the most dangerous because the hemorrhage is likely to be the most severe, and death may occur before help can be obtained. This variety may go on much longer without rupture than either of the other forms. When rupture does occur the hemorrhage is frequently so excessive that very prompt measures must be taken to prevent rapid death.²⁰¹

TREATMENT OF ECTOPIC GESTATION

Two words of caution will here be necessary. First, it is necessary to remind the reader once more that we are still engaged merely in recording medical testimony, and are not giving judgments upon what is or is not allowed from an ethical standpoint. Secondly, the reader is reminded that we are not attempting to give medical instruction, but only the barest summary of those few points that have an important bearing on moral questions. For adequate medical directions the reader must consult medical treatises.

We shall briefly record medical opinion as to the proper treatment (1) for cases of abdominal pregnancy near term; (2) for cases after rupture of the tube, with non-viable fetus; (3) for cases before rupture.

ABDOMINAL PREGNANCY NEAR TERM

In England, according to Father Davis, it is fairly common practice in cases of advanced abdominal pregnancy with a viable child, to allow the child to die, and to defer the operation for its removal until some months later, when the adhesions of the

²⁰⁰ B. Mann, in *Medical Journal and Record*, October 17, 1928.

²⁰¹ D. E. McGillivray, in *Northwest Medicine*, Vol. 25, 1925, pp. 191-94.

placenta and fetus to the abdominal organs are found easier to disengage.²⁰²

The foundation for this English practice may perhaps be revealed in the following passage by C. Noon, who writes:

In cases of ectopic pregnancy operated upon at or near term, in which the fetus was living, a mortality of 88 per cent has been recorded in a series of cases collected *many years ago* by Sir Francis Champneys. Very careful consideration must therefore be given to the case before advising operation at this stage, as the mortality of the operation will be considerable.²⁰³

It must be observed that the mortality in such cases is now certainly far less than 88 per cent. Guermeur puts it at 21.6 per cent,²⁰⁴ and American surgeons apparently estimate it as lower still. The practice of allowing the child to die has consequently not gained unanimous approval in this country.

The fact that the adhesions become easier to separate after some time has elapsed following the death of the child is admitted, but this advantage is by some believed to be outweighed by the danger of infection. Doctor Max Thorek, surgeon of the American Hospital, Chicago, thus summarizes the situation:

With a dead fetus beyond term, the two great dangers which the surgeon has to deal with are hemorrhage on removal of the placenta, and sepsis. The danger of an uncontrollable hemorrhage in such a case has forced several surgeons to defer operating until long after fetal death, but in the avoidance of hemorrhage the danger of sepsis arising from the presence of the macerated fetus, has to be reckoned with. Sittner's statistical study of 125 collected cases shows, however, that it is better to operate at once than to await fetal death when a fetus is at or about term, and that the statistics of the comparative mortality of the cases operated upon

²⁰² *Ecclesiastical Review*, Vol. 77, pp. 408 et seq.

²⁰³ *The Practitioner*, London, Vol. 121, 1928, pp. 191-96.

²⁰⁴ *Thèses Bordelaises*, 1923-24.

before and after fetal death do not prove that it is better to await the latter event.

Sittner's statistics of cases of living children after extra-uterine development shows that in a series of 93 such cases, 45 children died within a few months after birth from causes connected with their extra-uterine development. However, a fairly large percentage of such children develop after birth as well as intra-uterine children, and there appears to be no reason why such a pregnancy, if it has advanced to the viable period, should not be allowed to go on to term, unless there is some condition present which threatens the life of the mother. While there is general agreement, therefore, on the expediency of immediate operation when an extrauterine pregnancy is diagnosed in its early stages it is the consensus of opinion that in the late stages the fetus should be allowed to come to term and an abdominal section then be done.

Dunning, Boldt, and others favor operation when the false labor pains occur, because if it is not extracted then the fetus usually succumbs: but Moelibus, Bovee, Reed, Nicholson, and in fact the majority of authors, state their preference for operating shortly before full term is reached.²⁰⁵

Other authorities state that the adhesions of the placenta are not "too difficult" to be overcome.²⁰⁶

Alfred C. Beck, reviewing 262 cases of late ectopic pregnancy in which the patients were operated on while the child was still alive, gives it as his conclusion from the study of the results of these operations that *eight and one-half months of gestation was the safest time to operate, for both mother and child.*²⁰⁷

²⁰⁵ Dr. Max Thorek, "Extra-uterine Pregnancy Developing to Term," in *Clinical Medicine and Surgery*, 1927, pp. 1-3.

²⁰⁶ Pestalozza et al., *Trattato di Ostetricia*, Vol. 2, p. 597.

²⁰⁷ "Treatment of Extra-uterine Pregnancy after the Fifth Month," in *Journal of the American Medical Association*, Vol. 73, 1919, p. 962.

In this class of cases, as it is fatal to the child to operate too late, so too it will be fatal to operate too soon. On this point Doctor Harbeck Halsted writes:

In most cases we agree with Dr. Cragin when he states that before the sixth month of gestation the patient should be operated upon as soon as the diagnosis is made; but if the diagnosis is not made until after the sixth month it is only fair to consider the life of the child, and if the patient can be under close observation in a hospital the added risk to the mother of waiting until the child is viable seems so slight that it is perfectly justifiable to wait until eight and one-half months of gestation, or until some untoward symptoms arise demanding an earlier interference. The reason why eight and one-half months is chosen is because it gives us a well-developed child without running the risks of spurious labor, which usually takes place at or near term, and usually kills the child and endangers the mother's life. (...) The sixth month is chosen perfectly arbitrarily as the dividing line between immediate and deferred operations, and there may be exceptions both ways. Each case should be treated on its own merits.²⁰⁸

Dr. Halsted summarizes his conclusions as follows:

If the diagnosis is made before the sixth month, operate immediately.

If after the sixth month, if fetus is alive, operate as near eight-and-a-half months as possible.

If spurious labor is in progress and the fetus is alive, operate at once.

If diagnosis is not made until after the death of the fetus, if possible wait from one to three months before operating.

Each case should be treated on its individual merits.²⁰⁹

²⁰⁸ "Report of Five Cases of Late Ectopic Pregnancy," in *Medical Journal and Record*, June 6, 1928.

²⁰⁹ *Ibid.*

In France, according to the testimony of Jeanneney and Villar,²¹⁰ surgical opinion favors operating immediately upon diagnosis, without any delay to allow the child to reach maturity, or even a more favorable stage of viability. This opinion is apparently based on statistical studies of Baronnet,²¹¹ who reaches the conclusion that only a little over 8 per cent of the 303 children extracted alive develop normally and without deformity to adult life, and of Guermeur,²¹² who purports to show a heavy mortality (21.6 per cent) for the mother in cases operated upon at term, as compared with a slight mortality (5.7 per cent) in cases operated upon from the fifth to the seventh month.

The more common American practice, however, which favors consideration of the interests of the child, at least after the sixth month, seems to be based on sufficient factual studies. From a moral standpoint it is absolutely preferable.²¹³

RUPTURED ECTOPIC PREGNANCY WITH CHILD NOT YET VIABLE

Medical opinion is unanimous that laparotomy and removal of the entire ruptured organ, if possible, with the fetus, is the only treatment.

There is some difference of opinion, however, on the question whether operative intervention in cases where the tube has already ruptured should be absolutely immediate, or slightly delayed with a view of attenuating the extreme shock suffered by the patient.

McGillvray thinks that usually slight delay and restorative treatment are advantageous.

Rarely this hemorrhage may be so severe that immediate operation is imperative. Usually by the time the diagnosis is made

²¹⁰ "La Grossesse Abdominale et son Traitement Chirurgical," in *Gynécologie et Obstétrique*, Vol. 17, 1928, No. 3.

²¹¹ *Thèses Bordelaises*, 1921-22.

²¹² *Thèses Bordelaises*, 1923-24.

²¹³ This question is discussed more fully from a moral standpoint in Chapter VI.

the principal harm has been done. The bleeding has stopped, and other methods than operation will suffice to tide the patient over the critical period, when she has suffered from severe loss of blood and the vital powers are at a low ebb, namely warmth to the extremities, absolute quiet, relieving of pain, and complete abstention from foods and liquids by mouth. ... By following this procedure a surgeon can take his time in getting ready to operate, and oftentimes he will be surprised at the increased ability of his patient to stand the operation.²¹⁴

Ladinski, writing in 1908, expressed the opposite view, and refuted at length the arguments of Robb and others in favor of expectant treatment in such cases, in preparation for the operation.²¹⁵

More recent studies favoring immediate operation are those of Hawks, who in a series of 184 clinical cases shows a mortality of 8.8 per cent in the cases which were immediately operated after rupture of the tube, and 17 per cent in those where the operation was deferred in favor of restorative treatment,²¹⁶ and of Sellers and Saunders.²¹⁷

TREATMENT BEFORE RUPTURE OF THE TUBE

Before rupture there is almost complete unanimity in favor of immediate operation for the excision of the tube.

²¹⁴ D. E. McGillivray, in *Northwest Medicine*, Vol. 24, 1925, pp. 191-94.

²¹⁵ Cf. Ladinski, "Ectopic Pregnancy: A Study of 110 Cases," in *American Journal of Obstetrics*, Vol. 57, 1908, No. 1.

²¹⁶ Hawks, "Immediate Versus Delayed Operation in Cases of Collapse Following Ruptured Ectopic Pregnancy," in *Surgery, Gynecology, and Obstetrics*, February, 1923, pp. 232-34.

²¹⁷ "A Study of 211 Cases of Ectopic Pregnancy," in *Southern Medical Journal*, Vol. 21, 1928, p. 283.

De Lee:

There is no expectant treatment for a growing ectopic pregnancy. The 'explosive body' must be removed from the abdomen as soon as possible.²¹⁸

Dannreuther:

When a diagnosis of tubal pregnancy before rupture has been established, the patient should be operated on immediately.²¹⁹

Ladinski (1908):

As the inevitable result of extra-uterine pregnancy is the death of the fetus, and unless recognized in time very frequently that of the mother, the only rational treatment is operative, and fortunately there is no difference of opinion on that score at the present time. I have looked upon unruptured ectopic pregnancy in the nature of a foreign growth, and have invariably advised operation.²²⁰

Ladinski (1912):

Gynecologists are agreed as to the necessity of immediate operation in unruptured tubal pregnancy; it is only in the ruptured variety that opinions differ with regard to the indication for immediate operation.²²¹

Citations of opinions to the same effect could be multiplied almost *ad libitum*. It is important, however, to observe that "immediate operation" is not meant by all the authorities in an absolute sense. Ladinski, for example, although he favors immediate operation, does not insist that an unruptured tubal pregnancy must in every case be rushed to operation.

On the contrary, there is no particular danger or risk to the patient if, for some good reason, the operation is postponed for a

²¹⁸ *Principles and Practice of Obstetrics*, 1924, p. 429.

²¹⁹ "The Enigma of Ectopic Pregnancy," *Journal of the American Medical Association*, Vol. 88, 1927, pp. 1302-05.

²²⁰ Ladinski, in *American Journal of Obstetrics*, Vol. 57, No. 1.

²²¹ Ladinski, in *Journal of the American Medical Association*, Vol. 59, 1912, p. 854.

short time, provided however that the patient is kept under close observation and is so situated that an operation can be performed at once in the event of rupture.²²²

The only professional plea that has come to our notice in favor of long expectant treatment before rupture—and this evidently dictated by ethical considerations—comes from Dr. Clement of Friburg.²²³

In ectopic gestation the surest mode of treatment, morally speaking, that which would conciliate most efficaciously the interests, or rather the absolute rights of the two beings, would assuredly be, in my opinion—as long as the 'fetal cyst' by its normal and regular development testifies to the vitality of the germ—what we are accustomed to call in surgery for analogous situations, 'armed expectation,' to wait until the child is, if not absolutely at term, at least certainly viable, to proceed to its abdominal extraction, keeping all the while prepared for urgent intervention if a premature rupture should take place. This will remove all scruples from the consideration of the child's side, since usually it has then already detached itself from its vital connections. The mother would be duly instructed in the symptoms which could indicate the beginning of a probable rupture. If she could be kept under observation in a hospital, or in its immediate vicinity, where she would be assured of timely intervention, the risks of laparotomy which she would have to undergo, even when it must be premature, would not be notably increased.

MANNER OF OPERATING

It is of cardinal importance to know exactly how this operation is performed, and we must at once distinguish two quite distinct methods, one of which is almost universally recommended for

²²² *Ibid.*

²²³ *Le Droit de l'Enfant à Naître*, Beyaert, Bruges, 1927. The English translation of this work, *Thou Shalt Not Kill: A Doctor's Brief for the Unborn Child*, is published by the Peter Reilly Co., 133 N. 13th St., Philadelphia.

early ectopics, the other being recommended by a few in cases where the development has progressed nearly to maturity.

In the first class of cases the operation is described as "extremely simple." After making the necessary abdominal incision, the surgeon finds and cautiously disentangles the swollen tube, handling it very gently to avoid rupture, which may be imminent from the slightest jar. Hemostatic forceps are put in position at the junction of the tube with the uterus, and also between the uterus and the ovary, it being regarded usually as advisable to excise that organ with the affected tube. The blood-supply having thus been excluded from the entire tube, two strokes of the surgeon's scissors now sever the tube, which is immediately removed entire. Stitches then are substituted for the hemostatic pincers. Such is the essential order of this operation as far as it concerns our question.²²⁴ It therefore consists of the simple excision of the entire tube, generally with the corresponding ovary. In the tube are contained the fetus and placenta. This of course supposes that neither abortion nor rupture has yet occurred. If either has occurred, the operation remains essentially the same. The fetus will then be found either still inhering in the ruptured tube—and then of course it is removed with the tube—or fallen into the peritoneal cavity, in which case it will be removed with the mass of blood which has to be drained off.

Before speaking of the second method of operating, a brief inquiry is appropriate regarding the possibility of baptizing the fetus when the above-mentioned method is used. Will the fetus live long enough to make his baptism possible? Unfortunately, no medical treatise that we have seen gives this question so much as a passing mention, although, even from a purely medical standpoint, regarded as a detail affecting the intimate convictions and consequently the sentiments and spiritual comfort of a great class of patients, it would seem to merit attention. From the answers of the

²²⁴ Pestalozza et al., *Trattato di Ostetricia*, Vol. 2, p. 597.

American specialists to the questions asked them in connection with the discussion of this matter in the *Ecclesiastical Review* in 1893, we learn that in the excision as practiced in those days the fetus was often produced alive. In the controversy which followed that inquiry, Father Eschbach stated that Dr. Martin of Brussels had reported in 1892 that of fifty-six ectopic fetuses excised by him, only one was brought out alive. To which Father Lehmkuhl retorted that, in his estimation, the conferring of supernatural life upon even one infant soul for eternity was no negligible gain. Since, barring complications, the excision of a pregnant tube may now be performed by an expert, under favorable circumstances, in a very short time—Pestalozza²²⁵ actually puts it at ten minutes—the chances of conferring valid baptism, provided the child was alive when the operation was begun, would seem to be considerable.²²⁶

Formerly, instead of excising the entire tube, it was fairly common practice to kill the fetus directly first, either by piercing the amniotic sac and drawing off the fluid, or by an electric shock, or an injection of drugs. All these methods are quite obsolete. Father Davis quotes from a standard work on gynecology to prove that other methods of direct killing of the fetus are losing ground in medical opinion because they have proved ineffective as a cure for the mother.

In recent years, social operators have suggested conservative treatment of the tubes in cases of tubal pregnancy. Some, for example, have dilated the abdominal end of the tube and pressed out the ovum; others have split open the tube and shelled out the ovum from its wall. In the latter case the wound in the tubal wall is carefully sutured. We have tried this experiment upon several occasions, and in some cases with success. In the majority of cases,

²²⁵ *Op. cit.*, Vol. 2, p. 599.

²²⁶ This matter will be dealt with in the argument. Attention must be called here to the necessity of having everything ready for the immediate baptism of the fetus, absolutely if he is certainly alive, conditionally if that be doubtful.

however, the oozing of blood is so continuous and difficult to control, that one is afraid to leave the tube behind.²²⁷

In more advanced cases of tubal pregnancy, where the fetus has developed to considerable size without rupture of the tube, some authorities counsel a similar procedure, which is designed to obviate the difficulties caused by the increased bulk of the fetus and the placental adhesions. They first slit the tube, sever the umbilical cord, and remove the fetus; and then take care of the tube and placenta.²²⁸ *In passing, we must note that this method of operating, if the fetus is alive, is certainly a direct killing, and certainly indefensible. It is one thing to remove the tube containing the fetus; it is another thing to remove the fetus directly. This distinction will be made clearer in the argument; but in the meantime it is necessary to emphasize the fact that only the first method of operating—namely, the removal of the tube itself, without interfering directly with the fetus—is the only method which is in any way defended in this thesis.*

CHANCES OF SURVIVAL OF THE FETUS TO VIABILITY IF THE OPERATION IS DEFERRED

Dr. Cragin²²⁹ reported six cases of advanced ectopic pregnancy which had occurred at the Sloane Hospital for Women prior to 1919, in all of which the fetus had developed beyond six months. All six of his patients were operated upon, and in all six cases the mother recovered, while in three of them the baby also lived.

Harbeck Halsted²³⁰ reviews these cases and adds five of his own which occurred at the same hospital from 1919 to 1926, and in

²²⁷ J. M. Munro Kerr and others, *Obstetrics and Gynecology*, Edinburgh, 1923, p. 244.

²²⁸ Cf. Pestalozza, *Op. cit.*, p. 599. All authorities agree that the removal of the entire tube and placenta is advisable when possible. In case they are so firmly connected that it is deemed dangerous to remove them, "marsupialization" is resorted to; that is, they are left in the cavity and sewn back to other organs.

²²⁹ E. B. Cragin, *The Practice of Obstetrics*, p. 549.

²³⁰ Report of Five Cases of Late Ectopic Pregnancy," in *Medical Journal and Record*, June 6, 1928.

which five of the mothers and four of the babies survived the operation.

Of the total eleven operations, therefore, ten of the mothers, or more than 90 per cent, and six of the babies, more than 50 per cent, survived. Some of the children, however, were deformed, and some died soon after the operation.

Baronnet²³¹ gives the following: Of 303 fetuses extracted alive, 58 per cent died in 24 hours. Of the 42 per cent who survived, only 32 per cent or about 13 per cent of the total, lived beyond five years; and of these one-third were deformed. His conclusion is that only about 8 per cent of the live children yielded by advanced ectopic pregnancies develop as normal individuals. We must not lose sight of the fact, however, that all the 303 children brought out alive by the operations he records, could have had a chance for baptism, which is no negligible advantage, regardless of how long they lived or what the social value of their lives may have been.²³²

In the Mayo Clinic in twenty-four years (1903 to 1926), out of 445 operations for extra-uterine pregnancy, 9 cases of *lithopædion* were reported. This interesting but gruesome result of ectopic gestation occurs where an abdominal pregnancy goes to term, the child, finding no egress in the absence of an operation to deliver him, dies, is gradually penetrated with calcium salts, and is carried as a "stone child," sometimes for years.²³³ An interesting study of this phenomenon is given by Masson and Simon,²³⁴ who record 174 cases from 1582 to 1926. As only more mature fetuses undergo this transformation, the majority of these went to term before the death of the fetus, and a very large percentage indeed reached viability. In

²³¹ *Thèses Bordelaises*, 1921-22.

²³² Statistics taken from Jeanneney and Villar, "La Grossesse Abdominale et son Traitement Chirurgical" in *Gynécologie et Obstétrique*, Vol. 17, 1928, No. 3.

²³³ The exact chemical process by which calcium is deposited in the tissues here, or elsewhere in the body, is not well understood.

²³⁴ "Extra-uterine Pregnancy: Lithopædion," in *Surgery, Gynecology, and Obstetrics*, April, 1928, pp. 500-08.

all of these latter cases, then, there was a time when the fetus could have been extracted alive and viable; and their number must be added to the 303 which is the highest estimate we have seen of viable ectopic fetuses actually produced alive.

Of course, in order to estimate the child's chance of survival when an ectopic pregnancy is discovered *in its early stages*, one would need to know, not merely what chance the child has to be brought out alive after he has reached viability, but especially what chance he has, if not interfered with, to reach viability. This is impossible to gauge by actual statistics for the reason that it is general practice to operate immediately. We have therefore no complete statistics to tell the story.

Dr. William T. Kennedy, of the Woman's Hospital, New York City, has collected figures which tend to show a proportion of less than 1 per cent of advanced abdominal pregnancies among 1473 clinical ectopic cases.²³⁵

Indeed the very nature of abdominal pregnancy, and the connections of the placenta which are observed in those cases show that the survival of the child to term or viability must be extremely exceptional.

Masson and Simon state:²³⁶

In tubal pregnancy, advanced development of the fetus within the tube has been observed but rarely. Pregnancy is usually terminated before the third month except in the rare instances in which secondary tubo-ovarian, tubo-abdominal, intraligamentary, or abdominal implantation saves the fetus and permits it to develop to term. The same is true in the interstitial type of pregnancy. Primary abdominal and ovarian pregnancies are relatively rare, but they reach advanced development oftener than do tubal pregnancies. Besides extra-uterine pregnancy it is conceivable that a mature fetus might enter the abdomen as the

²³⁵ *American Journal of Obstetrics and Gynecology*, Vol. 10, 1925, pp. 858-62.
²³⁶ "Extra-uterine Pregnancy: Laparoscopy," in *Surgery, Gynecology, and Obstetrics*, April, 1928, pp. 500-08.

result of rupture of a pregnant uterus, and the mother recover without surgical interference. But this accident is usually fatal unless surgical measures are promptly instituted.

Wilcox writes :

Another exception must be noted, and that is the tube may never rupture fully and thus the fetus may be retained there, reaching full development and viability, either to be removed alive by the surgeon's art, or to die from imprisonment; but it is rare that the tube endures to full term. Indeed it seldom holds out over three months, while the greater number rupture in six weeks. After rupture from the tube, if the fetus lives, it is because it has escaped with its membrane intact and its placenta or decidua still attached, and because this placenta has been able to fasten itself upon some surface from which it can draw sufficient nourishment for the support of the dependent ovum. This surface may be the intestines, the bladder, the omentum, peritoneum, outer surface of the uterus, or any place to which it can adhere.²³⁷

We may therefore certainly take it as the unanimous opinion of the medical profession, based on all the experience available, that an early ectopic has but a very slight chance of developing to viability. It is of course impossible to express in terms of an exact mathematical formula the chances which an early ectopic fetus has to reach viability. Much as we may regret the absence of a mathematical calculation of the exact chances, this universal and well-founded opinion is the best evidence we have. It is substantially unanimous expert testimony upon a fact which is entirely within the field of medical science.

TRANSPLANTATION OF THE FETUS FROM THE TUBE TO THE UTERUS

Dr. Clement, of Friburg, speaking of the treatment of ectopic pregnancy, remarks :

²³⁷ "The Early Recognition of Ectopic Pregnancy," in *Medical Gazette*, April, 1922.

In certain cases, at the beginning, will not a technique well studied enable us to consider some day the possibility of grafting, perhaps of the implantation within the uterus of the ovum with its vascular pedicle, combined perchance with the dilatation of the cavity or with the amputation of a corner of the uterine musculature, such as is now practiced for the ovary?²³⁸

What is here skilfully discerned as a possibility has in at least one instance been accomplished as a fact. The detailed account of this remarkable operation is so interesting and so important that we shall relate it at length. We quote, with permission, from an article published by Dr. C. J. Wallace, in *Surgery, Gynecology, and Obstetrics*, in 1917.²³⁹

According to Edgar the pathology of ectopic gestation is in part as follows:

"This includes changes in the ovum, fetus, and uterus. The gestation sac is formed from the coats of the tube wall. The muscular tissue, instead of undergoing hypertrophy, often tends to disappear. The attachment of the ovum does not differ from that in normal uterine pregnancy. A placenta forms, but the decidua structures are rudimentary, so that the chorionic villi penetrate readily into the gestational sac as far as the peritoneum. If the fetus does not die, its tendency is toward poor development, and the various deformities and diseases noted in intra-uterine fetuses. Exceptionally, survival occurs, and the child may be well developed. The collateral changes in the uterus during ectopic pregnancy are the same to a certain extent as those found in normal pregnancy, even the formation of the decidua vera. If the ovum dies these changes are arrested; otherwise they progress, although at a much slower rate than in intra-uterine pregnancy. The decidua, however, do not keep pace with the uterus, and are usually thrown off *en masse*, simulating abortion. Exceptionally, they are retained to term, when so-called false labor occurs."

²³⁸ *Le Droit de l'Enfant à Naitre*, Bruges, 1927.

²³⁹ Vol. 24, p. 578. Permission of the author and of the review are gratefully acknowledged.

Thus we see that the early gestation in the tube is practically the same as in the uterus with the exception of its chorionic villi which extend deeper, or rather through, into the muscular wall, due to the thinness of the parts in the tube.

Up to a certain point the tubal gestation is identical with intra-uterine gestation. Up to a certain point the uterus keeps pace with the tubal gestation and actually forms a decidua, enlarges, softens, grows dark in color, and in fact takes on all the early features of pregnancy.

It is playing the part of a disappointed hostess. It had expected, and was fully prepared, to receive the fecundated ovum, had it not been delayed. Even then it seems hopeful, and continues to develop, though slowly, and if the ectopic pregnancy goes on to full term the uterus will be seen at that time to be as large as a four months' natural pregnancy. Does it not look possible for an early tubal pregnancy to be transplanted into the uterus, where everything is ready and waiting for it?

When we find an early case where the tube is still in a healthy condition, not too badly distended, and all things favorable, I think we should make a supreme attempt to save the life of the growing child by opening the tube carefully and dissecting out the pregnancy intact and transplanting it into the uterus where nature intended it should go. It does not endanger the life of the mother, and may be her only chance to bear a child. In support of this theory, I wish to report a case which will show without doubt that it can be done.

Here follows the date of first acquaintance with the case, September 13, 1915, the general description of the patient, who was twenty-seven years old, had been married five years, and had no children although she and her husband were desirous of having them. She was not known to be pregnant, but was found to be suffering from a fibroid tumor in the posterior wall of the uterus. Dr. Wallace operated for the fibroid on September 15, 1915.

"When the abdomen was opened..." continues Dr. Wallace,

"...we found an ectopic gestation in the left tube at the outer part of the isthmus. The tube was very soft and healthy, enlarged to the size of a walnut, but not distended. The uterus showed the same shade of darkening color.

The fibroid was about the size of a large hen's egg, and extended into the cavity of the uterus. On removing the fibroid I was compelled to make a clean-cut incision encircling the tumor, and into the cavity of the uterus, extending down to and involving the inner os. Knowing their anxiety for raising a child, I decided to try at least the one thing at hand—to transplant the ectopic pregnancy. I knew it could be easily removed from the cavity of the uterus if it did not grow to the wall and be retained and nourished to full development. Had it failed to attach itself, it could have easily been dislodged by the use of a curette. However, I was not called upon to remove it, and all went well. The tumor removed, I left the uterus protected while I carefully opened the tube and dissected the pregnancy out intact, being careful not to injure the sac in any way, by keeping wide away and including part of the tube wall. It came out very easily and was in size about equal to a large olive. It was at once placed within the cavity of the opened uterus and caught by two of the sutures of the inner row of plain number one catgut used in closing the wound of the uterus. The tube was closed in like manner and left in place. The patient was watched carefully for any hemorrhage, vaginal discharge, or sign of trouble, for two weeks, with no symptoms whatever. She left the hospital on the 14th day after a complete recovery.

The pregnancy went on normally to full term and resulted in the natural birth of a fine boy, fully developed and without a scar, May 2, 1916. No doubt the raw surface of the edges of the wound in the uterus was instrumental in the perfect attachment of the transplant. They gave a good source of blood-supply to the raw surface of the detached sac or tube-wall, thus enabling it to adhere readily.

After forecasting that other cases of the kind may be expected in the future, Dr. Wallace adds:

We may and will have failures in this as in other transplantation procedures, but there is not the danger involved in this transplantation that there is in many of the others. Certainly it is worth the not extreme effort in favorable cases. At this time it is of course difficult to differentiate the favorable case, and this matter must be left to the judgment of the surgeon. The condition of the tube and surrounding circumstances, such as the stage of development, inflammatory conditions, adhesions, displacements, and the wishes of the mother, must all be considered.

In May, 1931, Dr. Wallace was asked by letter to give a personal confirmation of the above account and his present opinion regarding the feasibility of the operation. He replied under date of May 4, 1931, confirming the account in every particular. He also states in his letter that he has not performed any similar operation since, for the reason that he has not been fortunate enough to discover another tubal pregnancy which was suitable for transplantation. He does not know of any other case in which a similar operation has been done, but he says:

I think there is a time in all tubal pregnancies when an intra-uterine transplantation would be successful. Other than for the necessary extreme care in dissecting the sac from the tube—mainly to keep far enough away to prevent injury and to allow for sufficient tissue through which to pass the fixation suture—the process is simple, and certainly without exceptional danger.

With this authentic account of a unique case, our medical testimony is sufficiently complete to support the argument.

ILLUSTRATIONS



Fig. 15. Photomicrograph (retouched) showing how the large hemorrhage of a blood vessel is crushing the villi together and destroying their normal relations to each other and to the tube wall.

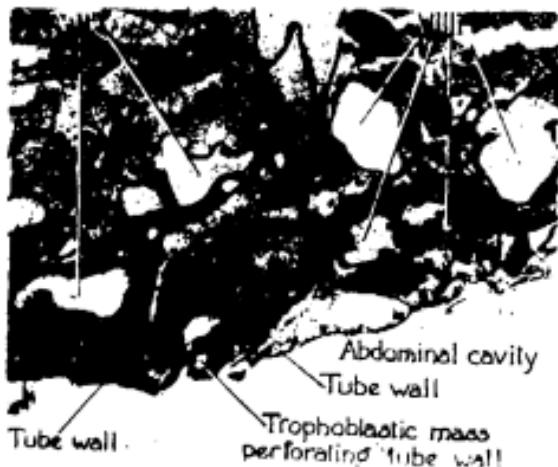
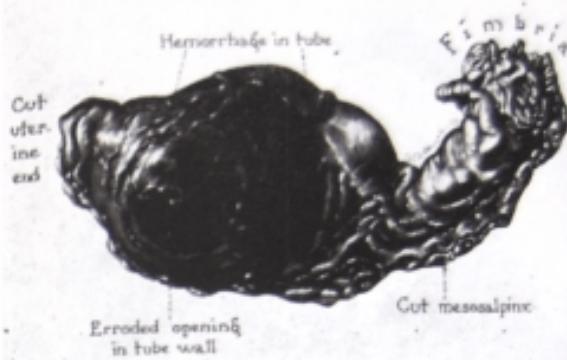


Fig. 17. Photomicrograph showing several villi attacking tube wall, and the trophoblastic cells of one having completely perforated the wall.



A RUPTURED FALLOPIAN TUBE



Fig. 1.—Photograph of longitudinal section of tubal pregnancy showing relations of ovum to tube; basalis (serotina) with riddled tube wall beneath it, capsularis (reflexa) distended by hemorrhage, the angles of capsularis with tube wall particularly distinct, embryonic vesicle bounded by chorion, amnion with contained embryo, hypertrophied tube wall near basalis, and the distended tube wall.

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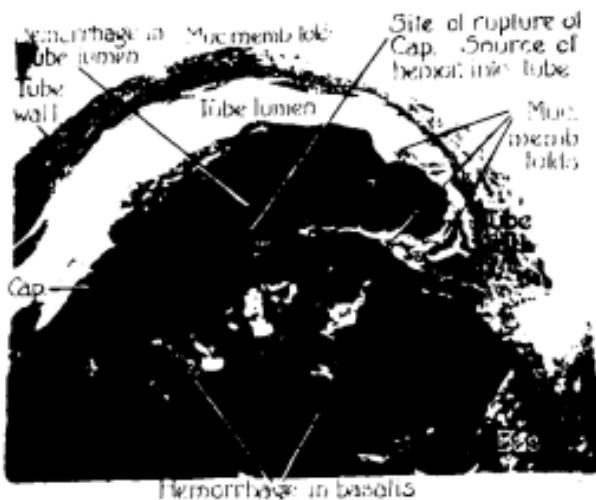


Fig. 24. Photomicrograph showing angle between tube wall and capsularis (reflexa), mucous membrane of tube wall reflected for some distance on capsularis; shows also massive hemorrhage into intervillous spaces, site of rupture of capsularis (internal ovum; capsule) and hemorrhage through rupture into tube lumen.



Fig. 25. Photomicrograph showing cross sections of villi entirely within a vessel of the tube wall.

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PART IV
THE ARGUMENT

CHAPTER VI

MORAL ARGUMENT AND CONCLUSIONS

THESIS: The removal of a pregnant fallopian tube containing a non-viable living fetus, even before the external rupture of the tube, can be done in such a way that the consequent death of the fetus will be produced only indirectly. Such an operation may be licitly performed if all the circumstances are such that the necessity for the operation is, in moral estimation, proportionate to the evil effect permitted. But in all such operations, if the fetus be probably alive, care must be taken to baptize the fetus immediately, at least conditionally.

THE principal contention of this thesis contradicts the extreme views of those moralists who hold that *until the tube is actually ruptured* the removal of a tube enclosing a living and non-viable fetus is always and necessarily illicit. That severe opinion, in as far as it is based on a supposed absolute prohibition of such operations by the Holy Office, has already been disposed of.²⁴⁰ In as far as it seeks to support itself by intrinsic reasons, it must hold that the principle of the double effect cannot justify the operation, either because the removal of the tube before external rupture is *necessarily a direct killing* of the child, or because, though it be indirect, there *can never be a proportionately grave cause* sufficient to justify it. Our argument, though positive, will be so arranged as to meet successively these two alternative positions of our adversaries.

²⁴⁰ Cf. Chapter IV.

1. *WHEN THE PREGNANT TUBE IS REMOVED, THE DEATH OF THE FETUS IS PRODUCED ONLY INDIRECTLY.*

This matter will be made clear if we consider successively various hypotheses. For the sake of comparison, let us begin with a case slightly different from the one stated in the thesis. Let us suppose a case of tubal pregnancy which has reached the crisis; a dangerous hemorrhage has already actually begun, either from the external rupture of the tube or from what is called "tubal abortion." The fact is that such a hemorrhage may be, and frequently is, a present deadly peril to the mother's life (to estimate the danger in any individual case will of course be the part of the physician). Let us suppose that in the instance the hemorrhage is a present mortal danger. The only means of remedying the situation is laparotomy, the excision of the ruptured tube and the ligation of the bleeding vessels. The fetus, of course, will have to be removed with the tube; and I believe no moralist would hesitate to permit the removal of the tube under those circumstances, even though there still adhered to it by means of the placenta and the umbilical cord, a living and non-viable fetus whose death would certainly be hastened by the removal. It is evident that in that case the killing of the fetus is indirect; for if it were direct, no degree of necessity, no circumstances whatever, would justify it. It is indirect because it is neither the formal object of the intention, nor the immediate material object of the physical operation. To put the matter into ethical terms, the killing of the fetus is not *willed directly* either as an end or as a means, nor is it *done directly*, but only foreseen and permitted (because it cannot be avoided) as a consequence of the thing done. It is indirect because it is only indirectly the object of the will, and only indirectly the object of the physical action.

Surely the removal of the fetus in that case contributes, as such, nothing whatever to the cure of the mother. Hence it cannot possibly be intended as a means to her cure; and much less is it intended for its own sake. Further, it is evidently not the object (I do not mean the purpose), directly, of the operation. It is not the

thing which the operation does. The thing which the operation directly does is to remove the bleeding tube which is the source of the hemorrhage. It is really an accident that there happens to adhere to the tube a living fetus which has not yet developed to the state of viability.

It may be objected that, whether it is done *directly* or not, the death of the fetus is produced very *effectively* by the operation. This must be admitted. But the principle of the double effect allows the *effective* production of an effect, provided it be indirect in both the moral and physical sense as above explained, and provided there be a proportionate cause. We are now dealing with the first of these requisites, the indirectness of the evil effect.

Without changing the case, let us look at the same matter from a new viewpoint by considering the physical steps in the operation itself.²⁴¹ The first thing that is done after opening the abdomen is to find the ruptured tube and to exclude the blood supply from it by hemostatic forceps. It is certain that by this procedure no effect is more immediately produced than the stopping of the hemorrhage. In a sense this first step contains the whole essence of the operation. The excision of the ruptured tube, and the substitution of stitches for the forceps, are necessary of course, but they do not constitute a new object for the operation. Essentially, whether you consider the temporary binding of the vessels with forceps, or their permanent ligation by means of stitches, you have the same operation, an operation which stops the hemorrhage. The one effect which is absolutely immediate is the stopping of the blood flow; from that, two less immediate effects follow, which as between themselves are equally proximate; namely, the conservation of the mother's life and the extinction of the life of the fetus. Of these one is not more immediate than the other. Exactly the same pinch of the forceps, the same stroke of the scissors, which conserves the blood supply for the mother, cuts it off from the fetus. The latter dies as an

²⁴¹ Recall the description, p. 130.

inevitable consequence of an act done through necessity to save the life of the former.

We believe that these considerations make it perfectly clear that, where the operation is performed in the manner we have described, and after the external rupture of the tube, the killing of the fetus, though inevitable and certain, is indirect. That is the single point with which we are now concerned. But we must now proceed to consider the matter in the hypothesis that the tube is not yet ruptured externally.

If, instead of waiting for the actual external rupture of the tube, it is deemed necessary to anticipate it by removing the tube before that crisis is reached, the case is indeed different in one important respect. It is different in that it may then be far less evident that there exists a proportionately grave reason for operating. In other words, it is less evident that the danger to the mother is so imminent as to require the operation even at the cost of indirectly extinguishing a human life. That aspect of the case we shall consider later. At present we are concerned solely with the question of the *directness* or *indirectness* of the evil effect produced; namely, the death of the fetus. Our contention is that, even if the pregnant tube is removed before it is externally ruptured, the killing of the fetus is still indirect, provided the operation is performed in the manner indicated, that is, by removing the tube itself with the fetus enclosed therein.

The killing of the fetus is still indirect because both the intention of the operator and the physical nature of the operation remain exactly the same as they were in the last hypothesis. The operation consists of exactly the same steps, in the same order: the opening of the abdomen, the finding of the affected tube, its sequestration from the blood supply, first temporarily with forceps and then permanently by suture of the vessels. Again the tube, with the fetus, is removed as a mere incident to an operation which in intention and in fact is essentially one which stops hemorrhage.

The last statement can cause surprise only to one who is unacquainted with the physiology of ectopic gestation. The objection is in fact made that in the case we are now considering it is a sound tube which is removed, whereas in our first hypothesis it was a ruptured tube; and that consequently the direct object of the operation is changed; that it cannot now be the tube, since that is sound, but that it must be the fetus, who is known to be the cause of the trouble.

It should be noticed that this objection really tends to call in question the indirectness of the evil effect, rather in the intention of the operator than in the physical course of the operation. For it is plain that in the latter aspect the case is exactly like the one last considered. The operation follows step by step exactly the same course. There is even less likelihood that the operator will directly touch the fetus at all, than there was in the other case where the fetus had already emerged from the tube.

The objection proceeds upon an entirely false assumption of fact; for it is absolutely false that in tubal pregnancy the tube remains sound until the moment of its external rupture.

At this point the reader is asked to review carefully the physiological facts which must form the essential basis of this discussion, and which are detailed in Part III. Attention is particularly directed to the section on the development of ectopic pregnancy, and to the detailed studies of Dr. Litzenberg, with the plates illustrating them²⁴² and of Dr. McDonald.²⁴³ Until they are contradicted by equally respectable *medical* authorities, these studies must be taken as conclusive proof that in fairly advanced stages of ectopic pregnancy, even before external rupture of the tube, the following phenomena are frequently found:

²⁴² See pp. 141-144.

²⁴³ See pp. 141-144.

1. Absence of adequate protective decidua, and the consequent *deep penetration* of the musculature of the tube by the ovum.
2. *Perforation of large blood vessels* in the tube muscle walls by the chorionic villi of the ovum, causing *profuse hemorrhage* within the tissues of the tube, instead of the normal blood supply for the fetus which is produced in uterine pregnancy.
3. Further destructive effects caused by this extravasation of blood, such as the *splitting and dissection of the muscular coats* of the tube wall, and not infrequently the *destruction* of the tube, or its conversion *into a hematoma or blood-clot* by repeated internal hemorrhages.

It seems impossible to read and weigh this medical testimony without realizing that what is called "rupture" of the tube is but the last stage of a process which is gradual and which frequently, long before the crisis, has weakened, riddled, and disintegrated the tube itself. It is consequently an error to conceive of tubal rupture as the sudden bursting of an organ which up to that moment had been perfectly sound—a first accident resulting from mere physical distention caused by the pressure exerted by a growing fetus.

This plain view of the facts regarding the physical condition of the tube, even before its rupture, enables us to dispense with any wordy debate upon the question whether tubal pregnancy is or is not a "pathological condition." Most physicians call it pathological, and it seems an appropriate term; but the mere word does not make a particle of difference in the case from an ethical standpoint. There is no magic in the word "pathological." One sometimes hears it used in this connection as if it solved the whole ethical question; and then the discussion turns upon the word, losing sight of the facts. "Pathological" is simply a word used by physicians to describe a very complex collection of facts. It is the facts which really matter, not the word used to describe them. The facts regarding the condition of the tube even before its rupture enable us to determine whether the removal of the tube before its external

rupture is or is not justified as a purely medical measure. The facts show that the tube itself, even before what is called its "rupture," is riddled, perforated, disorganized, at least in many cases; and if that condition exists it is beyond doubt that the operation by which it is removed has for its direct object the removal of the tube itself, and not of the fetus contained in the tube. That, be it remembered, is the sole question before us at this moment. The question of proportionate cause will be dealt with later.

From another standpoint this view is confirmed by medical experience. Father Davis has already pointed out that where the method of operating is, so to speak, inverted—where the fetus itself, instead of the tube, is made its direct object, by slitting the tube and shelling out the ovum, leaving the tube in place—the operation is attended with far less success. As one authority puts it, "one is afraid to leave the tube behind."²⁴⁴ Does not this show that it is really the tube, and not the fetus, which is the *proximate* source of trouble, and which ought to be the *direct* object of the operation? To the same effect is the testimony of Pestalozza and his associates,²⁴⁵ that the death of the fetus in the tube does not at once put an end to the mother's peril, because the tube itself is so affected that even after the embryo ceases to grow the tube may rupture from a slight shock.

The objection has been strongly urged that there is no pathological condition of the tube "apart from the pregnancy."

It will be found that practically all [physicians] agree that in tubal pregnancy it is the pregnancy that causes the danger to the mother's life. The mere fact that the doctors call tubal pregnancy a pathological condition, or a disease, that threatens the mother's life, cannot obscure the fact that *it is the pregnancy, and not some*

²⁴⁴ J. M. Munro Kerr and others, *Obstetrics and Gynecology*, p. 244.

²⁴⁵ *Trattato di Ostetricia*, Vol. 2, pp. 589-90.

*pathological condition of the tube apart from the pregnancy, that threatens the mother's life.*²⁴⁶

This objection seeks to identify the pregnancy itself, or the fetus, with the pathological condition that physicians speak of in ectopic gestation. If it were true that there is no pathological condition other than the very pregnancy itself for the operation to reach, it might be argued that the operation is directly aimed at the pregnancy—that is, at the fetus; in other words, that the fetus itself is the *direct object of the operation*, and that it is therefore a *direct killing*, or *direct abortion*. That is the trend of the argument; and it has some plausibility. Yet, in our judgment, it is based on a failure to distinguish between the *remote* and the *proximate* object of the operation; or to speak in more exact ethical terms, between the *indirect* and the *direct* object.

That something quite distinct from the fetus is directly the object of the operation, is, we think, perfectly evident from the medical testimony we have adduced. That object, distinct from the pregnancy, is the fallopian tube itself, which, as a result of the pregnancy, has become so debilitated and disorganized, or destroyed by internal hemorrhage, that it now constitutes in itself a distinct source of peril to the mother's life even before the external rupture of the tube.

It is true that the doctors whose testimony formed the basis for the discussion between Father Davis and Doctor Finney, stated in a general way that "ectopic pregnancy is a pathological condition." They were using ordinary human language without adverting to a fine distinction, which happens, nevertheless, to be of very great consequence in the ethics of the question. Not one of those doctors would have denied that the *tube itself* is affected pathologically. In fact, that is the very meaning of their testimony, as is clear from the

²⁴⁶ Dr. Finney, in his reply to Father Davis, *Ecclesiastical Review*, January, 1928, p. 58.

far more detailed and accurate testimony which we have adduced from independent medical sources.

To answer the objection in quasi-scholastic form, therefore, we would say: there is certainly a pathological condition of the tube "apart from the pregnancy" in the sense that it is *entitatively distinct* from it; although we admit that the dangerous condition of the tube is caused by the pregnancy, and it is therefore not "apart from the pregnancy" in the sense of being *causally independent* of it.²⁴⁷

We must therefore distinguish the statement that "it is the pregnancy which causes the danger to the mother's life." Originally, or *remotely*, it is the pregnancy which causes the danger; but *finally*, and *proximately*—that is, here and now in many fairly advanced cases of tubal pregnancy, even before the rupture of the tube—it is the tube itself. And if the tube itself is here and now so disorganized, or in a broad sense of the word so "diseased," that it is a present grave danger to the life of the mother, then that organ may under certain conditions be removed, and it makes little difference what the cause of its diseased condition may be. Whatever the cause is, the present facts make it perfectly clear that it is the organ itself which is, and ought to be, the direct object of the operation. And that is the one point which this part of the argument has sought to establish beyond doubt.

2. THIS INDIRECT REMOVAL IS LICIT WHEN THERE IS A PROPORTIONATELY GRAVE CAUSE FOR THE OPERATION.

The evil effect—that is, the death of the fetus—having been proved to be indirect in cases where the tube itself is removed, it

²⁴⁷ We have adverted above (pp. 87 and 97) to the confusion which results from insisting on those slight affections of the tube "apart from the pregnancy," which antedate the pregnancy, and instead of being caused by it, are themselves among the causes that may produce it. It is impossible to build upon these the ethical justification for the operation: (1) because it is almost impossible to determine in advance whether they exist in any individual case; (2) because even when they are known to exist, they are in themselves too insignificant to constitute sufficient cause for the operation.

follows immediately from the principle of the double effect that this operation will be licit wherever the second condition named in the thesis exists; namely, whenever the necessity for the operation is, in moral estimation, proportionate to the evil effect permitted. It is on this principle that the operation is sometimes permitted where the fetus is still living after the rupture of the tube. It remains, therefore, only to determine under what circumstances, if ever, there may be a proportionate cause to justify the operation even before the rupture of the tube.

If any moralist should affirm that there can never be such a necessity until after the actual rupture of the tube, he would seem to us to be passing judgment on a question of fact which is entirely within the realm of medical science; and his judgment on that question of fact would be in direct conflict with the almost unanimous judgment of the medical profession. The imminence of the danger to which the mother is exposed in any case of ectopic pregnancy is surely a fact which physicians, and not moralists, are qualified to determine. And physicians quite unanimously agree that the danger may be grave, and even imminent, before actual rupture.

On the other hand, can we accept without modification the general rule announced by perhaps the majority of medical authorities, that whenever an ectopic pregnancy is discovered the tube may be excised immediately? Or, to put it in another way, can we dispense with any inquiry as to the "imminence" of the mother's peril, and simply take it as a universal rule that every ectopic is always such a grave present danger that the operation will be justified by the necessity? Two considerations militate against this too general conclusion.

In the first place, while it is true that most medical authorities *counsel* immediate excision, *their testimony on the facts* is far from proving that in every case, and especially at every stage, of ectopic gestation, the danger from which the mother is saved by operation is proportionate to that in which the operation places the child.

On the other hand, a *proportionately grave reason* is absolutely required. We may be tempted for the sake of finality of judgment to dispense with any inquiry into the imminence of the danger, and so to adopt a universal rule that every pregnant tube may be excised. No doubt, so simple a solution would be extremely convenient. It would relieve both the priest and the surgeon of all responsibility beyond the mere diagnosis of the case. But by its very simplicity such a sweeping judgment is suspect. No rule of thumb can be devised to solve without difficulty complex moral problems. We have a principle, that of the double effect, which is approved by long usage in Catholic ethics. But its application has always been an extremely delicate matter, and it will always remain so. In this respect each case must stand on its own merits. The best we can do is to take from the medical authorities their judgment on the facts and probabilities of the class of cases before us, discuss and weigh them patiently, and endeavor to arrive at some practical guides whose application in any individual case will aid us to determine whether there exists the requisite condition for the application of the principle; namely, a proportionately grave cause for the operation.

How to Estimate the Proportionately Grave Cause in Individual Cases

The evil effect which is permitted is the certain death of a human child. What are the good effects sought by the operation, which may counterbalance that? There are two good effects whose importance entitles them to be weighed in the balance: one is the better opportunity which the operation may afford of conferring baptism on the child while he is still alive;²⁴⁸ the other is the saving of the mother's life. *Per se*, either of these might constitute a proportionately grave reason. Yet it happens that the first of these reasons *alone* will never suffice. That is because if the fetus is

²⁴⁸ If the operation is delayed until actual rupture, the chances are that the child will be dead when it is removed.

extracted in order to baptize him, his removal becomes direct in intention, and in that case there is no room for the principle of the double effect, which applies only when the evil effect is both indirect in intention and indirectly produced. To justify the direct removal of the fetus in order to baptize him would be to employ the unconscionable and false principle that "the end justifies the means"—a principle which no Jesuit moralist has ever countenanced, and which Catholic moral teaching universally condemns.

Yet, in a case where the operation is undertaken as a purely medical measure for the saving of the mother's life, there is no reason why the greater chances of conferring valid baptism on the child should not weigh in the balance as an added motive in favor of the operation. The principal consideration, however, will be the necessity of the operation to save the mother from present imminent danger to her life.

In any concrete case the matter reduces itself to a balancing of probabilities. In itself the life of one human being is equal to the life of another. We do not permit ourselves any preference based on social expediency for the life of the mother as being more "valuable to society" than the life of the child, in the sense that the child's life can be directly sacrificed to save hers. But, where there is no question of direct killing, but only of weighing consequences under the principle of the double effect, one life may be more "worth saving" than another, in the sense that the chances of saving it are far better. The principle of proportionate cause requires us to take this into account. We weigh, not one life against another, but the actual probability of saving one life against the actual probability of saving the other. Hence the meagerness of the chance that the child has of coming to viability if the operation is deferred, must enter into the calculation. If the child has a very meager chance—less than one in a hundred—of ever coming to viability even if the operation is deferred in the hope of that event, then the evil effect permitted by performing the operation immediately in the concrete

instance will most probably be the shortening of a prenatal life by a few weeks or months. If in the same case the chances of saving the mother by an immediate operation are excellent, while without it it is morally certain that she must die, then the good effect secured by the operation is the saving of a human life with an expectancy of many years. I would say that in that case the good effect outweighs the evil, it being always clearly understood that the estimation of the proportion between the two effects must be strictly limited to the cases where the evil effect is produced only indirectly.

The doctor, within whose province it is to estimate probabilities of fact, must answer these questions:

1. *How great is the present necessity of the operation to save the life of the mother?* Or, in other words, what chance has she to live without a present operation for the excision of the tube? The greater her necessity, or the slighter her chances without an immediate operation, the more safely may the moralist judge that the cause for the operation is proportionate.
2. *Looking at the matter from the other side, what chance has the child to live to viability if the operation is deferred?* The slighter his chances, the more safely may the operation be permitted for the sake of the mother.

It would be absurd to ask a surgeon to state these probabilities in mathematical terms according to the law of chances. A moral estimate is all that is possible. But these are the probabilities that enter into the determination of each individual case.

In view of the fact²⁴⁹ that the chances of the fetus to survive to viability if the operation is deferred, are extremely meager in the ordinary unruptured case of ectopic pregnancy, it would seem that a notably greater probability of saving the mother's life by the

²⁴⁹ Proved by medical testimony in Chapter V, under the heading: Chances of survival of the fetus to viability if the operation is deferred, p. 133.

present excision of the tube would constitute a proportionately grave reason for the operation.²⁵⁰

We may make this matter a little clearer still by considering various hypotheses.

(a) **When the mother can be kept under observation**

Without in the least impugning the testimony of specialists to the effect that in unruptured tubal pregnancy immediate operation is *in general* the best treatment from the standpoint of the mother, it seems certain that there are at least some cases where her danger is not extreme, and where watchful delay will not add materially to her danger. We quoted a very respectable authority to the effect that "there is no particular danger or risk to the patient if, for some good reason, the operation is postponed for a short time, provided however, that the patient is kept under close observation and is so situated that an operation can be performed at once in the event of a rupture."²⁵¹ As long as competent medical opinion judges that in any individual case *it is prudent* to wait, keeping the patient under observation, it cannot be said that the necessity for an immediate operation is sufficiently urgent to make it permissible. *The mere fact that the patient is subjected to some anxiety while the matter is in suspense cannot constitute sufficient reason to operate.* The decision as to the degree of present danger to the mother rests entirely with the doctor. If he judges that her present danger is so grave that, all things considered, an immediate operation offers a *notably greater probability of saving her life*, then the operation may be performed,

²⁵⁰ In the original thesis as presented to the examining board of the Gregorian, and approved, this important conclusion was stated in these terms :

"Ex iis quæ superius ex medicorum testimonio retulimus, videtur quidem dici posse in præsenti scientiae medice statu, fetus ectopicum spem habere moraliter nullam ut lucem videat maturus. Quod si verum est, probabilitas notabiliter major vitam matris salvandi præsenti excisione videtur esse causa proportionata operationem perficiendi."

²⁵¹ Ladimski, in *Journal of the American Medical Association*, Vol. 59, 1912, p. 854. See also the quotation from Dr. Clement, p. 129.

supposing always that it is the tube that is excised, not the fetus directly, and that care be taken to confer baptism on the fetus as soon as possible. If the above-mentioned condition does not exist, then the operation should be deferred as long as the fetus is alive and the danger not aggravated.

(b) **When the mother cannot be kept under observation**

The decision in this case will rest upon the same condition; namely, whether, in competent medical opinion, there is or is not a *notably greater probability of saving the woman's life* by immediate operation. Evidently the verification of this condition will be more frequent in this class of cases than in the last; but it must be a serious, considered, individual professional judgment in each case. We cannot morally sanction any rule of thumb one way or the other; neither "*Never operate until external rupture of the tube*," nor "*Always operate immediately in every case as soon as an unruptured ectopic pregnancy is discovered*." The circumstances of each case must be considered.

From a moral standpoint the objection may be raised that in the case last considered, it is a *future* danger that is forsaken, whereas a *present* danger is an essential condition for the licitness of the operation. If the danger were wholly future, of course the operation would not now be permissible. But the danger may be already grave, and the present rational estimate of future probabilities may make it still more formidable under the circumstances. We judge that in such case the danger is present in the sense required by the principle of the double effect.

(c) **When the ectopic is discovered in the course of an operation after the abdomen has been opened for some other cause**

In view of the difficulty of certain diagnosis of early ectopic pregnancy, this case will be not infrequent. If the condition of the patient is such that, in prudent medical opinion, it is judged she will be incapable of sustaining a second operation after a few weeks, when the tube, if left in place, will, to a moral certainty, rupture,

making a second operation imperative, the condition for proportionate cause is verified; namely, there exists *at present a notably greater probability of saving her life by the immediate excision of the tube*. Again we think its excision would be justified, with the same proviso that care be taken to attend to the all-important matter of baptizing the fetus.

Here, however, there is a very important observation to be made regarding the possibility of transplanting the fetus, in favorable cases, into the uterine cavity. We invite the attention of the medical profession very earnestly to the case reported by Dr. C. J. Wallace of Duluth.²⁵² Some doctors to whom we have mentioned this truly extraordinary case have been inclined to scepticism in regard to it. For our part we do not see how the facts can be doubted, attested as they are. We do not presume to pass judgment on the medical question how far, in the present state of surgical science, this transplantation of ectopies into the uterus may be practicable. But it has been done by Dr. Wallace; it is foreseen as a practical possibility by Dr. Clement of Friburg. Why may it not fall to the lot of an American (and, please God, a Catholic) physician, so to study this technique, and so to select favorable cases for its application, as to win universal recognition for a new and truly life-saving triumph of the surgeon's art?

In our judgment, it has a practical aspect even now. Since, in many cases, especially when an early ectopic is discovered whilst the abdomen is open in the course of an operation for some other cause, it will be licit, on the foregoing principles, to excise the tube, it will in all those cases be licit to attempt a transplantation, if that can be done without notably increasing the danger to the mother. Besides, there may be cases where, owing to the general good condition of the patient and the comparatively "healthy" condition of the tube (in early cases, perhaps exceptionally), even though the absolute excision would not be allowed, still the transplantation

²⁵² *Surgery, Gynecology, and Obstetrics*, Vol. 24, 1917, p. 578. Cf. Chapter V, end.

could be attempted, if there is well-grounded hope of success. The reason is that if the pregnancy were allowed to continue even for only a few weeks, the opportunity of transplanting the fetus would in all probability be lost, with all hope practically, of saving the child, while the mother's danger would at the same time be notably increased.

(d) In advanced cases where a fetus has gone four or five months without rupture of the tube, or as a secondary abdominal pregnancy after rupture, the crisis being now passed

In cases where the fetus has progressed to four or five months without rupture of the tube, his nearer approach to viability would seem to give some hope of his reaching it. Hence an even greater present danger than usual to the mother's life would be required to make the excision permissible. However, there will no doubt be cases, notably of the interstitial variety, where, in the surgeon's opinion, it would be condemning the patient to morally certain death to wait. In such cases the operation may be performed immediately.

If the fetus is near term, or at least near viability, as a secondary abdominal pregnancy after the crisis of tubal rupture has been safely passed, there is still greater reason to await the viability of the child. We quoted with great approval the recommendation of Dr. Harbeck Halsted to the effect that "if the diagnosis is not made until after the sixth month, it is only fair to consider the life of the child, and if the patient can be under close observation in a hospital the added risk to the mother of waiting until the child is viable seems so slight that it is perfectly justifiable to wait until eight and a half months of gestation, or until some untoward symptoms arise demanding earlier interference."²⁵ Dr. Halsted himself remarks: "The sixth month is chosen perfectly arbitrarily as the dividing line between immediate and deferred operations, and there may be exceptions both ways. Each case should be treated on its own

²⁵ *Medical Journal and Record*, June 6, 1928.

merits." For moral reasons, we would disregard any arbitrary dividing line, and follow the rule that where the crisis of tubal rupture has been safely passed, and the child is still living and developing towards viability, unless the excision of the tube is so necessary that the mother is morally certain to succumb if it is deferred, it should be deferred to give the child a chance for life.

Dr. Halsted's medical testimony on this point is confirmed by that of Doctors Thorek and Beck.²⁵⁴

Due consideration for the life of the child is therefore not only dictated by ethical principles, but is also in accord with the teaching of high medical authorities.

3. CARE MUST ABSOLUTELY BE TAKEN TO BAPTIZE THE FETUS IMMEDIATELY

This part of the thesis needs no argument to sustain it, provided one knows what baptism is. It is not merely a religious rite. For a dying infant, it is the one absolutely indispensable and sufficient means of obtaining that supernatural life which constitutes eternal beatitude. This is true absolutely and objectively of every dying infant, quite irrespective of the faith, or want of faith, of its parents. Therefore, if there is even a slight probability that the fetus still lives, he should be baptized, and as soon as possible, because his death, after the removal of the pregnant tube from the mother, is a matter of seconds. In order to secure the maximum efficiency in this essential matter, a competent, well-instructed person should be charged with the responsibility of attending to it. If it is not certain that the fetus is alive, or that there is a fetus at all, the condition "*si capax es*" should be prefixed to the words, "Ego te baptizo in Nomine Patris et Filii et Spiritus Sancti."²⁵⁵

²⁵⁴ See pp. 129, 131.

²⁵⁵ In English the words, "If thou art capable of receiving baptism, I baptize thee in the Name of the Father and of the Son and of the Holy Ghost," should be spoken while the fetus is put in contact with water by opening the fetal sac and immersing the contents quickly in water.

Corollary

Where the child has reached viability or maturity as a secondary abdominal pregnancy and is still alive, is it lawful to defer the operation until after his death, with a view to making the operation easier or safer for the mother?

This grave question was touched upon some years ago by Father Davis, who wrote:

In regard to the cesarean operation for delivering a fetus which in the rarest cases has gone to term in the pelvic cavity, an eminent surgeon has said that in such an operation 'the placenta will be found hopelessly fixed to bowels, liver, etc., with very large blood-vessels, and the mother dies whilst one is trying to remove the placenta.' It is on account of such grave risks that the usual procedure, in England at all events, is not to operate at all to remove the child, that is in cases where the mother has survived the bursting of the fallopian tube. A spurious labor ensues, and the child dies inside the mother. Child and placenta shrivel up; they may then be removed without so much danger.²⁵⁶

We are not competent to pass a professional judgment on the medical facts involved here; but we must point out that professional opinion itself is far from being in unanimous agreement with the surgeon quoted. That the operation is serious, all admit; but the mortality is certainly far below that of 88 per cent, which, though recorded "many years ago" was still being gravely cited in England as late as 1928.²⁵⁷ We quoted Guermeur as recently having computed the mortality of such operations at 21.6 per cent.²⁵⁸ Competent modern Italian authorities state that the adhesions of the placenta in such cases are not too difficult to be overcome. Marsupialization is commonly resorted to when the entire placenta is too firmly engaged to be removed. Finally, a number of eminent American authorities have been quoted to the

²⁵⁶ *Ecclesiastical Review*, October, 1927, p. 408.

²⁵⁷ Cf. C. Noon in *The Practitioner*, London, Vol. 121, 1928, pp. 191-96.

²⁵⁸ Cf. Chapter V, "Treatment of Ectopic Gestation," p. 123.

effect that, all things considered, the period of eight and a half months is the best time to operate, *for both mother and child.*²⁵⁹

Taking the facts from medical authorities, therefore, it would seem that in such operations there are at least three chances out of four of saving the mother, and almost a moral certainty of delivering the child alive, in case of timely operation; while in case of deferred operation her chances are only slightly improved, and the opportunity of saving the child is deliberately thrown away. If these facts are true, it seems evident that a timely operation to save the child is in practically all cases advisable, and in some cases might even become obligatory.

That in such circumstances the operation to deliver the child is licit (and consequently advisable), can easily be proved by applying to this case the principle of the double effect. In this case the good effect directly intended (the saving of the child) outweighs the evil effect which may come about contrary to the operator's intention (the *possible* death of the mother). For it is not only the child's natural life which is at stake. That indeed may be somewhat precarious, since many such children are born deformed or are doomed to an early death. But here, unless he is delivered by cesarean section, the child is certain to die without baptism, and hence to be deprived of the benefit of supernatural beatitude; whereas if he is delivered alive, baptism can certainly be conferred on him, nor will an early death thereafter deprive him of its benefits. If, therefore, the chance of being able to save and baptize the child is at least as great as the chance that the mother may succumb under the operation, it seems that the operation may, and even should, be performed; though there will exist no strict obligation on the part of the mother to consent to it, except as stated in the succeeding paragraphs.

²⁵⁹ Cf. testimony of Drs. Thorek, Beck, and Halsted, Chapter V, pp. 129-32.

One might even go farther and adduce a very strong argument to show that the operation to deliver the child could, in certain cases, be truly obligatory.

The unborn child, in these circumstances, having no chance for baptism except he be delivered by an operation, is in what moralists call an "extreme spiritual necessity." This is in fact the very example which is often chosen to illustrate a situation of extreme distress in the spiritual order.²⁶⁰ Now, it is a generally admitted principle that the law of charity imposes a grave obligation of succoring the neighbor in such necessity, even at the cost of grave temporal loss or at the risk of one's life.²⁶¹

It follows, theoretically at least, that in these circumstances the operation would be obligatory.

It is true, however, that this obligation strictly exists only when the hope of being able to deliver the child alive, and to baptize him, amounts to a moral certainty, while at the same time no evil results even more serious than the death of an un-baptized child are to be feared from the operation. Because these attendant circumstances are in many cases at least doubtful, most moralists soften the strict theoretical obligation, and give the rule that the *strict obligation* to submit to the operation of cesarean section to deliver the child is in *most cases*, not to be urged with rigor.²⁶² We do not intend to depart from this common teaching. Nevertheless, the admitted general principles which we have stated, and the consideration of the extreme necessity of the child who has no other chance for birth and baptism, condemn the practice of regularly allowing mature or viable fetuses to die in the abdomen, when, according to very respectable medical authorities, the operation to remove them alive at or near maturity offers very good hopes of success for both child and mother.

²⁶⁰ Cf. Noldin, *De Preceptis*, n. 75.

²⁶¹ *Ibid.*, n. 78.

In all cases, of course, the consent of the patient is to be urged with prudence and all gentleness.

²⁰ Génicot, *Theologia Moralis*, Vol. 2, n. 144; Lehmkuhl, *Theologia Moralis*, Vol. 1, n. 1009; Burke, *Acute Cases in Moral Medicine*, p. 100.

CHAPTER VII

SUMMARY OF CONCLUSIONS

1. The excision of an unruptured pregnant tube containing a non-viable fetus, done for the purpose of saving the mother's life, is not a direct, but an indirect, abortion. Because of its grave consequence for the child, it will be illicit unless there exists a *proportionately grave cause* for it. But it will be a licit operation when all the circumstances are such that there exists a proportionately grave cause. In all cases the child, if probably alive, should be baptized immediately.
2. The proportionately grave cause must consist principally in the necessity of the operation to save the life of the mother; but the greater probability of being able to baptize the child may also weigh as an added motive in favor of the operation.
3. In cases where the mother can be kept under observation, it will sometimes be possible to defer the operation without great danger. If so, it should be deferred. But if in the judgment of competent physicians the danger is such that a *present* operation to excise the tube offers a *notably greater probability of saving the mother's life*, the operation will be permissible, even before the rupture of the tube or the viability of the fetus.
4. When the mother cannot be kept under observation, the same rule applies. If, in competent medical opinion, it is judged prudent to defer the operation, it should be deferred. If, on the other hand, as may be the case, a *present* operation offers a *notably greater probability of saving the mother's life*, the operation will be permissible.
5. The same rule applies where an ectopic is discovered in the course of an operation, when the abdomen has been opened for some other cause. If the *present* excision of the tube offers a *notably greater probability of saving the mother's life*, it may be done.

6. Whenever it is licit to excise the tube, it will also be licit to attempt the transplantation of the fetus into the uterine cavity, provided it is judged that this will not very seriously add to the danger to the mother. In addition to these cases, it will also be licit, in early ectopic gestation, to attempt a transplantation, even though the absolute excision of the tube would not be allowed, provided there is, in competent medical opinion, good probability of its success, without seriously adding to the danger to the mother.
7. In cases where the pregnancy has gone beyond four months, the nearer approach of the fetus to viability will require an even more urgent necessity on the part of the mother as a proportionate cause for the excision of the tube. In such cases, the probability of her death without immediate operation would have to *approach a moral certainty* before the excision of the pregnant tube would be permissible.
8. In cases where the crisis of tubal rupture has been safely passed and the fetus is still alive, developing as a secondary abdominal pregnancy, there is no arbitrary date before which the operation should be immediate and after which it should be deferred to viability. The rule is that in such cases the operation should always be deferred until the child is viable, unless an immediate operation is so necessary that the death of the mother without it is quite, or almost, a moral certainty.
9. The practice of allowing mature or viable fetuses to die in the abdomen when they could be removed alive without too greatly increasing the danger to the mother, does not commend itself. Where the child has reached viability or maturity, the operation to deliver him by cesarean section while still alive may, and even should, be performed (with the mother's consent), if in competent medical opinion the chance of saving the child by the operation is at least equal to the chance that the mother may die as a result of the operation. There will, however, be a grave obligation on the part of the mother to consent to the operation only in cases where it is morally certain that the effort to deliver the child alive and to

baptize him, will be successful. And even in this case the obligation is to be urged with prudence and gentleness.

10. In all cases where it is even slightly probable that a living fetus has been removed from the mother, care should be taken to confer baptism on it immediately. If there is any doubt of the presence of a living fetus, the condition "*si capax es*" should be prefixed to the form of the Sacrament.

Most people can easily see why abortion is wrong. But the issue becomes more complex for many when doctors call for an abortion because, if the baby is not destroyed, both mother and child will inevitably die. It is argued that between two evils, the lesser should be chosen.

Father Bouscaren's classic work is devoted to the only case in which this conflict is at all likely: the case of ectopic pregnancy. With the skill of a gifted moralist who is also a persuasive writer, the author shows that, although the death of one person is *in itself* a lesser evil than the death of two, nonetheless the death of one person *intended and produced directly by a violation of the moral law* is not a lesser evil than the death of two from natural causes without any sin on the part of anyone.

But Father Bouscaren also opposes the simplistic and heartless view that would require every ectopic pregnancy to be left to its all but inevitable outcome in the death of mother and child. He shows that it can never be right for a doctor to cause death *directly*, but that operations aimed at correcting a pathological condition, which *indirectly* end the unborn life, can be morally irreproachable on certain conditions. Father Bouscaren's explanations make sense of what is called the "double effect" principle, showing that it is a necessary and inescapable part of human ethical values, explaining and complementing the duty not to kill.

Drawing extensively on the most reputable medical sources, he explains very clearly the development of the ectopic pregnancy and its effect on the mother. Then he applies the teaching of the greatest moralists and the decisions of the Holy See to reach his conclusions: conclusions that continue to furnish the ethical norm in this field 75 years after the book's original publication under the title *Ethics of Ectopic Operations*.

ISBN 978-2-917813-53-9 90000



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